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METAPHYSICS:

A LECTURE

—BY—

SAMUEL SPAHR LAWS,

Professor of Metaphysics,

—IN THE—

University of the State of Missouri,

MAY 10, 1879.

[Printed sheets from Bound Volume of Lectures delivered by the Faculty of the Missouri University, during the session of 1878-9.]

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COMPLIMENTS OF THE AUTHOR.

METAPHYSICS.

A Lecture by Samuel S. Laws, Professor of Metaphysics in the University of the State of Missouri, May 10, 1879.

There is only too much reason to apprehend that the bare mention of metaphysics, as the subject of this lecture, suggests to some minds the question whether anything really serious or intelligible is intended. The prejudice against this subject is not unfrequently veiled under the following burlesque definition, credited to the blacksmith of Glamis: "Twa folk disputin thegither; he that's listenin disna ken what he that's speakin means, and he that's speakin disna ken what he means himsel—that's metaphysics!" The irrepressible wit of Sydney Smith was indulged in ridicule of it. It is related that, when lecturing on one of its topics, he exclaimed, in his deep, sonorous and warning voice, "Ladies and gentlemen, there is a word of dire sound and horrible import, which I fain would have kept concealed if I possibly could, but as this is not feasible I shall meet the danger at once and get out of it as well as I can. The word to which I allude is that very tremendous one of *Metaphysics*, which in a lecture on moral philosophy, seems likely to produce as much alarm as the cry of fire in a crowded

playhouse; when Belvidera is left to cry by herself, and every one saves himself in the best manner he can. I must beg of my audience, however, to sit quiet, and in the mean time make use of the language which the manager would probably adopt on such an occasion: I am sure, ladies and gentlemen, there is not the smallest degree of danger." This prejudice against metaphysics has not been confined to the rude and vulgar, either of the present or of the past. By placing the fool's cap on the head of Socrates, the ignorant derision of the Athenian populace culminated in his unrighteous death sentence by their judges. The spirit of this scene still lives. Once, metaphysics was named and esteemed the queen of the sciences; but what has been the fate of this princess? Our most distinguished modern scientists have been reenacting the part of Aristophanes, with this difference, that he employed ridicule against Socrates, avowedly in the interest of conservatism, whilst these votaries of nature have made a mistaken use of it in the supposed interest of progress. Were Shaftbury's criterion valid, that ridicule is the test of truth, it might legitimate this style of warfare; but more than once have other than groundlings with bloody hands joined in driving from the world's stage the brightest impersonations of the true, the beautiful and the good. Scientific, no less than religious truth, has had its martyrs; but through the ages, the two, properly understood, have never been in conflict with each other, whilst both have been in antagonism with ignorance, their common and implacable foe. Metaphysics is their common and faithful friend. With united voice the lovers of truth might peal forth the words of Tennyson, as the anthem of the centuries—

"Ring out the old,
Ring in the new;
Ring out the false,
Ring in the true."

But it must not be forgotten that the old is not always the false, nor the new always the true, as was illustrated in a notice once given of a book—perhaps one of the popular contributions to modern science—in which notice it was remarked, by way of commendation, that the book in question had in it much that was new and also much that was true; and by way of criticism, that what was true in it was old and what was new in it was false. The only rational rule of mental procedure is to "prove all things," whether new or old, and "hold fast to that which is good." By the faithful assertion of this catholic principle of judgment, we loyally venture to believe that our queen is destined to recover the crown and royal state of which she has been deprived, and to hold again her position in the universities of the world, less exclusively and pretentiously, no doubt, and yet with an empire subject to her restored sceptre, embracing whole kingdoms which, under the old regime, were not yet discovered. The science of the present reveals, daily, that it is not self-sufficient, and that, just as a building of large and imposing dimensions requires beneath its super-structure a foundation that sinks out of the view of the senses, so science rests on the transcendental and unseen realities of the world of metaphysics. Faith is more profound than reason.

As a corrective of the misconceptions and ignorance which generate the prejudice to which reference has been made, and as a means of enlisting an intelligent interest in our subject, it will be my aim to present it in as elementary and complete a manner as the limits of the hour and the surrounding circumstances will permit. It is due to the body of students of this University, that the one in charge of this disparaged department, which has been dropped or omitted from the curriculum of some of the

leading institutions of our day, should disabuse their minds of those false impressions which may disincline them to enter on this line of work. What may induce neglect of this study may also perniciously serve as a plausible apology for what should properly be esteemed a disgraceful ignorance. Moreover, as colleagues in the faculty of this University, each one by voicing his own department, not only the more effectively serves the students, but also his colleagues. Surely, one of the leading advantages of such a course of lectures as this one in which we have been engaged, is its measurable realization of the helpfulness of associated labor.

There are three words, viz., metaphysics, philosophy and ontology of which you will please take note as having identically the same significance. What is to follow amounts to little more than an exposition of the one true meaning of these three terms. I hasten to indicate that meaning.

The word metaphysics has a wide and also a narrow sense, and we must guard ourselves against equivocation by an explanation. In its narrow sense, it means all the sciences of mind, as distinguished from the sciences of matter; but in its broad and generic sense, it presupposes an acquaintance with these special scienees of both mind and matter and designates the science of being or an inquiry into the nature of knowledge itself, especially with reference to the substantial reality of mind, matter and God. A chair of metaphysics takes account of both of these aspects of the subject, but the present lecture is intended to set forth the one last named, that is, metaphysics proper as distinguished from metaphysics in the popular sense as designating a limited group of the special sciences. The word philosophy is also applied indifferently and equivocally to the special sciences

of matter and also of mind; but ontology has a less popular use and technically accords with metaphysics proper, which is our present theme. It has been already announced that it is the intention on the present occasion, without further notice, to use these three words in the same sense and that their most profound and important one, as will appear more fully from what follows.

In didactic teaching a definition has great virtue, at the opening of a discussion; it is like a port for which a voyager sets sail, as it gives definite regulation to his movements. But it is only at the end of the inquiry, that the pupil is supposed to be in a situation to criticise, modify or even supplant the definition, in the light of his own knowledge of the subject. The faith of the pupil at the outset is only provisional.

Each of the above words has its own interesting etymology and legend, but it is not their verbal but their realistic significance which is at present our chief concern. There have been numerous definitions given of the thing meant by metaphysics proper, philosophy or ontology; but this may be safely said of them all that, however diversely this ontology may beviewed, it is uniformly recognized as a form of knowledge. This broad fact may be serviceable, for we are able to distinguish three entirely distinct forms or phases of knowledge, and by so doing to individualize metaphysics in such a manner as to extricate it from what might otherwise be an inextricable confusion; and such a statement may have substantially the value of a definition, whether one be formulated or not. The first of these three kinds of knowledge is empirical. This is simple matter of fact knowledge and constitutes the experience of individuals and peoples, covering their inner as well as their outer life—it

is the spontaneous life of the world and constitutes the raw materials of its biography, its literature and its history. In its second phase, knowledge is scientific or modal. In this phase it is the product of reflection and generalization, for science consists of the systematic classification of the laws of phenomena. No amount of knowledge, whether confused or classified, abstract or concrete, constitutes science till laws are grasped and coordinated. But laws are the mere modes of the coexistence, continuance and succession of phenomena in time and space. The final and third division of knowledge into philosophic as distinguished from the empirical and scientific, is the one which invites our attention on this occasion. Empirical knowledge, in its childlike spontaneity and simplicity, takes no rational account of laws and causes, whereas, philosophy views things in relation to their causes and first principles, whilst science views phenomena in their uniform relations to each other in their successions and coordinations of time and space. The explanation of a phenomenon of experience from observation or experiment, may be either scientific or philosophic,—it is scientific, when the phenomenon is referred to its law; it is philosophic, when referred to its cause or sufficient reason. Science does not consist in a search for causes but in a search for laws, as being the formulation of the effects resulting from the uniform action of causes. The laws of nature properly considered have no causal force; they are correctly viewed as only "the paths along which the forces of nature move." The philosophy of nature is its actiology; the science of nature is its modality.

It is not meant that experience is ignorant of causality and its uniformities, but only that this spontaneous form of knowledge is in the concrete and that our spontaneous intuitions are quite free from abstract reflection

and construction. Nor is it meant that the scientist does properly or can possibly ignore causes, but only that, to the extent that he has or holds them in contemplation, it is not as a scientist but as a philosopher that he does so. The scientist is more than his science,—is not a mere scientist. Nor is it meant that the philosopher ignores experience and science, but that as a philosopher he lifts their contents to a higher plane. In each case, the man of experience, the man of science and the man of philosophy is somewhat more than himself, for the same soul, in its various stages of unfolding, is the one treasure house of all this threefold wealth of knowledge. Individuals, like nations and ages, pass from spontaneity to reflection and then, by criticism, discover a chaos or a continent. Ours is a critical age and the angel of truth is already calling to the watchmen, what of the night? and in the dawning of the morning of a day brighter than any on record, she is treading the firm earth with a surer step than ever before. With confidence may we say, in the bold language of Milton, "Let her and falsehood grapple; who ever knew truth put to the worse, in a free and open encounter."

Empirical knowledge answers the question—*what?* scientific knowledge answers the question—*how?* and philosophic, metaphysical or ontological knowledge answers the question—*why?* The what, the how and the why are not in isolation but are interdependent; and the true unity of knowledge is realized in their reciprocal communion; the first phase is phenomenal; the second modal and the third noumenal:

These distinctions, especially in their scientific and philosophic phases, seem to have struggled in the mind of Aristotle for articulate recognition and utterance, as is seen in such passages as the following from his Metaphysics:

"But in every respect is the science of ontology strictly a science of that which is first or elemental, both on which the other things depend and through which they are denominated. If then, this is substance, the philosopher or metaphysician must needs be in possession of the first principles and causes of substances. * * * But this is the same with none of those which are called particular sciences; for none of the rest of the sciences examines universally concerning entity."

The importance of these distinctions appears also in such passages as the following, from the Hegelian Schwegler's History of Philosophy:

"In what, then, is philosophy distinguished from these sciences, e. g. from the science of astronomy, of medicine, or of right? Certainly not in that it has a different material to work upon. Its material is precisely the same as that of the different empirical sciences. The construction and disposition of the universe, the arrangement and functions of the human body, the doctrines of property, of rights and of the state—all these materials belong as truly to philosophy as to their appropriate sciences. That which is given in the world of experience, that which is real, is the content likewise of philosophy. It is not, therefore, in its material but in its form, in its method, in its mode of knowledge, that philosophy is to be distinguished from the empirical sciences. These latter derive their material directly from experience; they find it at hand and take it up just as they find it. Philosophy, on the other hand, is never satisfied with recieving that which is given simply as it is given but rather follows it out to its ultimate grounds; it examines every individual thing with reference to a final principle and considers it as one link in the whole chain of knowledge. In this way philosophy removes from the individual thing given in experience, its immediate, individual, and accidental character; from the sea of empirical individualities, it brings out that which is common to all. In short, philosophy examines the totality of experience in the form of an organic system in harmony with the laws of thought."—(pp. 11-12.)

There is in this passage a certain interblending of the scientific and philosophical, which the above threefold distinction enables one easily to discern and rectify.

This wisdom, as it was termed by the earliest speculators of Greece; this philosophy or love of wisdom, as a later age more modestly termed it; this metaphysics, as it was named from the chance designation of the earliest formal treatise, that of Aristotle, on the subject; or this ontology, as defined by etymological refinement—call

this third and final form or phase of knowledge by what name we may, in all cases it seeks for the foundations of the edifice of human knowledge; the ultimate and enduring realities—the noumena—attainable by our intelligence, on which depends the certitude of what we know. Metaphysics transcends every particular science, whether of mind or matter, and every experience, and grasps what lies beyond and what, through the criticism of science and experience we learn, makes science and experience themselves possible. The real problem which metaphysics undertakes to solve, is this, the nature and ultimate conditions of our knowledge, in its last analysis. Is it real? is it illusory? is it phenomenal only? is it relative or absolute? has it objective as well as subjective validity? What is the ultimate, the final and the satisfying ground on which the superstructure of science and the accumulations of human experience, in their most comprehensive sense, repose? We seek an answer. Our accepted answer must be to us our philosophy; and hence, right or wrong, our philosophy is our theory of the universe. To us a universe unknown would be as zero; and it is real to us only as known. Theorize we must; facts without theory are dead rubbish; our nature demands science and philosophy, and in each, theory is more than hypothesis—a theory is a vindicated hypothesis.

It is now proposed to take a brief survey of the leading hypotheses of the ages, set forth in the attempt to solve the problem of knowledge: notice will first be taken of those various views which, in varying measure, are esteemed partial, inadequate and false. The one view which I conceive to be true and valid and alone entitled to recognition and consideration as a theory, will be reserved to the last. The truth is imperishable,

it is one and catholic and ever, like the sun, bears on its front a luminous glow. The soul hungers for it as the bread of its life, and nothing else can satisfy it. It is hoped that the conciseness of this survey enforced by the circumstances may occasion clearness rather than obscurity.

All the philosophies which have gone to record may be reduced to two, which are fundamentally distinct and antagonistic, viz., nihilism and realism, or as I shall take the liberty of calling them, phenomenalism and noumenalism. These two opposing views present the negative and positive poles of speculation; one is destructive and the other constructive.

I have a sweet or bitter taste, the smell of a pleasant or offensive odor, the sight of a beautiful or disgusting image, experience a feeling of joy or sorrow: the phenomenalist admits the appearances as phenomena of consciousness, but will not allow to these appearances any substantive reality, nor accept of either mind or matter as revealed or evidenced in any act of knowledge whatever. The phenomena are only as shadows without substance, and as dreams without a dreamer. The one point in common to all noumenalists is that the universe of being is something other than an illusion, a cheating mirage, a phantasm or dream, and that in the act of knowledge we grasp phenomena *plus* substantial reality, that at least a substantial self exists and endures amid all the mutations of the universe. But what follows will serve to render this general and abstract enunciation easily understood.

1. NIHILISM.

It is because the spirit of destruction without positive aim has animated the discontented elements of European society, especially of late in Russia, that these

communistic agitators have been called nihilists. Their spirit is precisely the same as that of the nihilistic philosophy; they seek the destruction of what is not satisfying, without offering to substitute something better in its place. In dealing with perishable objects such as the products of nature and art, the work of destruction has a fearful and irreparable advantage. A child with a hatchet may in a few hours destroy the great oak whose growth is the work of centuries. But in dealing with principles and things of a rational nature, the conditions of vitality are not so precarious. Truth itself is indestructible; and this is the stuff out of which knowledge, the fact which we seek to explain, is made, for all real and enduring knowledge, all that deserves the name of knowledge, consists of apprehended truth. Hence the repeated recoils and recoveries of thought from the misleadings of error, and the tireless renewal of efforts, after repeated failures, to gain the truth in its simplicity, in its fadeless beauty and soul-satisfying power, notwithstanding it is so often and so sadly misunderstood, misrepresented and dishonored by errorists. Nihilism mutilates the truth of the fact of knowledge in that it allows no reality, true or false, material or spiritual, to aught beneath or beyond apppearances; and even phenomena are speculatively esteemed and treated as illusory. This view is confessedly not accordant with man's spontaneous activity. It is, then, the unnatural progeny of a distorted, partial and mistaken interpretation of man's nature; but as man is an integral part of the universe, so far forth as that universe in its totality stands within the vision of knowledge, no hypothesis is capable of vindication which fails to provide, without omission or distortion, a complete exposition of all the facts of man's nature.

In the domain of speculation there are three names pre-eminently associated with nihilism, viz., Pyrrho, Hume and Fichte. Even Berkeley and Kant were realists. Protagoras, the sophist, is sometimes individualized as the representative of the dogmatic and Pyrrho as representing the sceptical or nescient phase of nihilism. Dogmatic nihilism denied the existence of aught beyond appearances and sceptical nihilism denied the knowableness of aught beyond, i. e. were it true that something other than mere sensible appearances exists, still we cannot know it: or as another has expressed it—"The difference, therefore, between Protagoras, the sophist, and Pyrrho, the sceptic, was this—that while the former maintained the universe to be a mere appearance *destitute of any answering reality*; the latter simply held that it was an appearance of which the *reality was unknown*." But as both of these phases of nihilism virtually emerge from the fragments and reports of Pyrrho transmitted to us, his name properly stands first on the roll of the representatives of this daring speculation. Diogenes Laertius, in his "Lives of Eminent Philosophers," gives a third more space to Pyrrho than to either Socrates or Aristotle. Let us attend to some extracts, chiefly from this ancient sketch. Diogenes says:

"The Pyrrhonean system, then, is a simple explanation of appearances, or of notions of every kind by means of which, comparing one thing with another, one arriyes at the conclusion, that there is nothing in all these notions but contradiction and confusion." Again: "The difficulties which they, (the Pyrrhoneans,) suggest, relating to the agreement of what appears to the senses, and what is comprehended by the intellect, divide themselves into ten modes of argument, according to which the subject and object of our knowledge are incessantly changing." After canvassing these and other modes, he continues: "As to the contradictions which are founded in those speculations, when they are pointed out in what way each fact is convincing, they (the Pyrrhonists) then, by the same means, take away all belief in it. * * And

they prove that the reasons opposite to those on which our assent is founded are entitled to equal belief." * * * He continues: "These skeptics, then, deny the existence of any test of any demonstration, of any test of truth, of any signs, or causes, or motion or learning, and of anything as naturally or intrinsically good or bad. For he (Pyrrho) used to say that nothing was honorable, or disgraceful, or just, or unjust."

And on the same principle he asserted that there was no such thing as downright truth; but that men did every thing in consequence of custom and law. "For that nothing was any more this than that." Again:

> But Democritus says that there is no test whatever of appearances, and also that they are not criteria of truth. Moreover, the dogmatic philosophers attack the criterion derived from appearances, and say that the same objects at different times present different appearances, consequently, if the sceptic (Pyrrhonist) does not discriminate between different appearances, he does nothing at all. If, on the contrary, he determines in favor of either, then, say they, he no longer attaches equal value to all appearances. The sceptics (i. e. Pyrrhonists) reply to this, that in the presence of different appearances, they content themselves with saying that there are many appearances, and that it is precisely because things present themselves under different characters, that they affirm the existence of appearances. Perhaps our opponent (the dogmatist) will say, Are these appearances trustworthy or deceitful? We (sceptics) answer that, if they are trustworthy, the other side has nothing to object to those to whom the contrary appearance presents itself. For, as he who says that such and such a thing appears to him, is trustworthy; so also is he who says that the contrary appears to him. And if appearances are deceitful, then they do not deserve any confidence when they assert what appears to them to be true. * * From all of which it follows, that the first principles of all things have no reality.

Pyrrho (384-288 or 360-270 B. C.,) is reported to have lived to the age of ninety or more. It will be observed from the dates given that he was a contemporary of Plato (430-348 B. C.,) and also of Aristotle (384-322 B. C.) whom he survived, at the least, for more than thirty years. Like the great church historian Neander, he is said to have "lived in a most blameless manner with his sister." Having followed in his youth the business of a huxter, he then became a painter and a

student of Democritus in the school of Anaxarchus, whom he accompanied in the train of Alexander the Great, as far as India. He was a native of Elis, and, on his return to that place, he is said to have been made a priest of the temple by the good will of his fellow citizens. Pyrrho himself, like Socrates, wrote nothing, but Diogenes says 'his friends Timon, and others of that class have left books. All these men were called Pyrrhoneans from their master: and persevered in overthrowing all the dogmas of every sect, while they themselves asserted nothing.' Whilst Sextus Empiricus, the physician, who flourished about 200 of the Christian Era, is the great storehouse of information and arguments on ancient scepticism which has been revamped in modern times, Pyrrho chiefly lives in what is preserved from his most eminent pupil Timon, a physician of Phlius, who wrote three books of satirical poems in which all the Greek philosophers are reviled as babblers except Xenophanes, the Hegel of Greece, who, in his esteem, sought the truth and Pyrrho who found it. Said Timon in the spirit of his master,—"That a thing is sweet I do not affirm, but only admit that it appears so." "Again, we feel that fire burns, but we suspend our judgment as to whether it has a burning nature." In a word, as it is pithely summed up by Ueberweg—"There exist no fixed differences among things." Such is Pyrrhonism.

The supreme psychological characteristic of this ancient nihilistic speculation is the assumed suspension or indifferency of judgment under the full blaze of evidence, however pertinent and cogent, whereas, by an inexorable law of the mind, adequate evidence apprehended, necessarily decides the judgment. There is no one respect in which the passivity of the intellect is

more strikingly revealed than in its submission to evidence. "These sceptics," says Diogenes, "deny the existence of any demonstration; of any test of truth." The blinding and perverting force of selfish passion and prejudice where moral issues are involved, being here out of view, the submission of the intellect to evidence is as stated. The human mind that would not be compelled to acquiesce in the demonstration that the three angles of a triangle are equal to two right angles or in the axiom that the whole is equal to all its parts, would be pronounced imbecile or idiotic; and a like failure to discern the equally valid moral distinctions as to things right and wrong, true and false, good and bad, would, under the kindly influences of our christian civilization, be cared for and treated as that of a lunatic.

Three centuries of Greek speculation preceded Pyrrho, extending from Thales downward and embracing the Academic, the Peripatetic, (308 B. C.) the Stoic and (306 B. C.) the Epicurean Schools, with all of whose founders he was a contemporary; and as he studied these pre-Socratic and post-Socratic systems, his mind sank into doubt and negation—not the Socratic doubt of the Academics, which balanced between the choice of positive probabilities; much less the doubt of the Cartesians, which has become the positive guarantee of certainty in our modern philosophy; but the doubt of unreality, for to him "the first principles of all things have no reality," which doubt leaves the mind a blank, or rather, a camera of unsubstantial images. His critical judgment could easily detect untenable elements in the schemes of his predecessors and contemporaries, and three alternatives were plainly open to him, (1) either the indiscriminate rejection of all, (2) an electic reconstruction by choosing the good and rejecting the

bad, or, (3) the positive substitution of a new and supposed better creation of thought. But Pyrrho's whole being moved away from the positive to the negative pole, he rejected all; and the issue in his mind was, as we have seen, the dreary subversion of all speculative knowledge, the denial of the existence and knowableness of all reality and of truth itself, for which he admitted no criterion and no distinctive character. It was speculatively the black, bottomless, hopeless and dreamy doubt of nihilism.

But human nature is often more sensible than human reason; its spontaneous activities often brush away like cobwebs men's fine spun speculations. Naturally enough Pyrrho practiced a better philosophy than he taught.

Aenesidemus, probably of the first century, A. D., says that 'Pyrrho studied philosophy on the principle of suspending his judgment on all points, without, however, on any occasion acting in an imprudent manner, or doing anything without due consideration, i. e., suspending judgment in all matters which do not refer to living and the preservation of life. Accordingly, say they, we avoid some things and we seek others, following custom in that; and we obey the laws.' Hence it is related that when, on a certain occasion, Pyrrho was driven back by a dog which was attacking him, he said to some one who blamed him for being discomposed, "that it was a difficult thing entirely to put off humanity; but that a man ought to strive with all his power to counteract circumstances with his actions if possible, and at all events with his reason." Horace says that one cannot drive out nature with a pitch-fork, and the law of self-preservation is by Pyrrho conceded to be stronger than theory and to bring the "actions" of the sceptic into discord with his "reason."

Hence, "he is represented on the one hand as a marvel of folly, on the other as a miracle of wisdom." For example: Diogenes says that "he never shunned anything and never guarded against anything, encountering every thing, even waggons for instance, and precipices, and dogs, and everything of that sort; committing nothing whatever to his senses. So that he used to be saved by his friends who accompanied him." But, on the other hand, Timon in one verse represents him as—

"The only man as happy as a god,"

Such contradictoriness of representation implies something more than an imperfection of the record; it seems to have arisen from the practical and confessed impossibility of acting in harmony with his theory.

It is not surprising that Pyrrho is differently estimated by different philosophers, for the portraiture of every one is necessarily somewhat personal, owing to his remains being second-hand, fragmentary and inconsistent, so that each one is left in good part to make his sketch from the colors on his own pallet. The fact is, the name of Pyrrho is highly typical, but the salient points of the above extracts and estimates sufficiently individualize his representative character as the father of scepticism. The paternity of many subsequent speculations is traceable to him. In the 17th century, the authors of the Port Royal Logic placed the following estimate on this system:

There are no absurdities too groundless to find supporters. Whoever determines to deceive the world, may be sure of finding people who are willing enough to be deceived, and the most absurd follies always find minds to which they are adapted. After seeing what a number are infatuated with the follies of judicial astrology, and that even grave persons treat this subject seriously, we need not be surprised at anything more. * * * We find others, on the contrary, who, having light enough to know that there are a number of things obscure and uncertain, and wishing, from another kind of vanity, to show that they are not led away by the

popular credulity take a pride in maintaining that there is nothing certain. They thus free themselves from the labor of examination, and on this evil principle they bring into doubt the most firmly established truths, and even religion itself. This is the source of Pyrrhonism (or scepticism) another extravagance of the human mind. * * * True reason places all things in the rank which belongs to them; it questions those which are doubtful, rejects those which are false, and acknowledges in good faith, those which are evident, without being embarrassed by the vain reasons of the Pyrrhonists, which never could, even in the minds of those who proposed them, destroy the reasonable assurance we have of many things. None ever seriously doubted the existence of the sun, the earth, the moon, or that the whole was greater than the parts. We may indeed easily say outwardly with the lips that we doubt of all these things, because it is possible for us to lie; but we cannot say this in our hearts. Thus Pyrrhonism is not a sect composed of men persuaded of what they say, but a sect of liars. Hence they often contradict themselves in uttering their opinion, since it is impossible for their hearts to agree with their language. We see this in Montaigne, who attempted to revive this sect in the last (16th) century. * * * Thus these disorders of the mind—the one leading to an inconsiderate belief of what is obscure and uncertain, the other to the doubting of what is clear and certain—have nevertheless a common origin, which is the neglect of attention which is necessary in order to discover the truth.—pp. 2-6.

On the contrary, Prof. Baynes in his note on this passage of the Port Royal Logic, holds that Pyrrho has done good service to philosophy, and that his "teaching consisted in showing that, since knowledge supposes relations, absolute knowledge is a contradiction." But it must have been a questionable *service*, for in his formal dialectics, Pyrrho seems to have set at defiance the law of identity, by repudiating all fixedness of predication; and also the law of contradiction, by holding that contradictions are entitled to equal belief and that "demonstration" is a fiction, so that "nothing is any more this than that;" and as to the matter or content of his logical forms, he held that the "first principles of all things have no reality;" and in addition to confounding all rational distinctions, he equally reduced all moral distinctions to a chaos by denying that anything is "honor-

able or disgraceful, just or unjust, good or bad." Certainly language must have lost all reliable significance, or such radical and sweeping negations are tantamount to the overthrow and annihilation not alone of "absolute knowledge" but of all knowledge. In its speculative attitude as well as in its suicidal practical recoil, by an appeal to the irrepressible spontaneity of human nature in its common sense utterances and activities, Pyrrhonism is a surprisingly complete anticipation of Hume. In fact, this Scotch sceptic and historian, who, as a philosopher, may be fairly viewed as Pyrrho's *alter ego*, seems to have borrowed the pallet of the Greek painter; and our Scotch professor certainly gives us a curious surprise in making Pyrrho the prototype of Hamilton instead of Hume.

Let us now make an immediate and silent descent across an interval of two thousand years, extending from the Greek Pyrrho, reputed "the true founder of scepticism," to the Scotch Hume (1711-1776), reputed "the prince of sceptics." The few extracts which will now be adduced, to reveal and epitomise his views, are of undoubted authenticity and genuineness, being in these respects unlike the conjectural extracts respecting Pyrrho:

It seems evident, that men are carried by a natural instinct or prepossession to repose faith in their senses; and that, without any reasoning, or even almost before the use of reason, we always suppose an external universe, which depends not on our perception, but would exist, though we and every sensible creature were absent or annihilated. Even the animal creation are governed by a like opinion, and preserve this belief of external objects, in all their thoughts, designs and actions.

It seems also evident, that when men follow this blind and powerful instinct of nature, they always suppose the very images presented by the senses, to be the external objects, and never entertain any suspicion that the one are nothing but representations of the other. This very table which we see white, and which we feel hard, is believed to exist, independent of our perception, and to be something external to our mind which perceives it. Our presence bestows not being on it: our absence does not annihilate

ti. It preserves its existence uniform and entire, independent of the situation of intelligent beings, who perceive or contemplate it.

But this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us that nothing can ever be present to the mind but an image or perception, and that the senses are only the inlets through which these images are conveyed, without being able to produce any immediate intercourse between the mind and the object. The table, which we see, seems to diminish, as we remove further from it: but the real table, which exists, independent of us, suffers no alteration: it was therefore nothing but its image which was present to the mind. These are the obvious dictates of reason; and no man who reflects ever doubted, that the existences which we sonsider, when we say, this house and that tree, are nothing but perceptions in the mind, and fleeting copies or representations of other existences which remain uniform and independent.

In all the incidents of life, we ought still to preserve our scepticism. If we believe that fire warms, or water refreshes, it is only because it costs too mucil pains to think otherwise.

Not only are the senses thus subverted but reason herself, as will immediately appear. Says Hume:

I have proved that these same principles, when carried further, and applied to every new reflex judgment, must, by continually diminishing the original evidence, at last reduce it to nothing, and utterly subvert all belief and opinion.

Again:

Reason first appears in possession of the throne, prescribing laws, and imposing maxims, with an absolute sway and authority. Her enemy, therefore, is obliged to take shelter under her protection, and by making use of rational arguments to prove the fallaciousness and imbecility of reason, produces, in a manner, a patent under her hand and seal. This patent has at first an authority of reason, from which it is derived. But as it is supposed to be contradictory to reason, it gradually diminishes the force of that governing power and its own at the same time; till at last they both vanish away into nothing, by a regular and just diminution.

"Nothing," nothingness or nihilism is, then, in Mr. Hume's own language, the upshot of his philosophy and he follows it to its utmost consequences:

I am uneasy to think I approve of one object, and disapprove of another; call one thing beautiful, and another deformed; decide concerning truth and falsehood, reason and folly, without knowing upon what principles I proceed. * * * For I have already shown that the understanding, when it acts alone, and according to its most general principles, entirely subverts itself, and leaves not the lowest degree of evidence in any proposition, either in philosophy or common life.

It is curious, as already intimated, that Hume seems so servilely to repeat Pyrrho. Pyrrho explained his practical inconsistency, by saying it was a difficult thing entirely to put off humanity, but that one should do so "with his actions if possible, and at all events with his reason." Hume draws the matter more deftly but, in precisely the same manner, concedes the practical absurdity of his scheme, thus:

> The great subverter of Pyrrhonism, or the excessive principles of scepticism, is action, and employment, and the occupations of common life. These principles may flourish and triumph in the schools, where it is indeed difficult, if not impossible, to refute them. But as soon as they leave the shade, and the presence of the real objects which actuate our passions and sentiments are put in opposition to the more powerful principles of our nature, they vanish like smoke, and leave the most determined sceptic in the same condition as other mortals.

But again:

> For here is the chief and most confounding objection to excessive scepticism, that no durable good can ever result from it, while it remains in its full force and vigor.
>
> We save ourselves from this total scepticism only by means of that singular and seemingly trivial property of the fancy, by which, with difficulty, we enter into remote views of things and are not able to accompany them with so sensible an impression, as we do those which are more easy and natural. * * We have therefore no choice left, but betwixt a false reason and none at all. For my part, I know not what ought to be done in the present case. I can only observe what is commonly done; which is, that this difficulty is seldom or never thought of.
>
> Most fortunately it happens, that since reason is incapable of dispelling these clouds, Nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind, or by some avocation, and lively impressions of my senses, which obliterate all these chimeras. I dine, I play a game of backgammon, I converse, and am merry with my frienks; and when, after three or four hours' amusement, I would return to these speculations, they appear so cold, and strained, and ridiculous, that I cannot find in my heart to enter into them any further.
>
> Here, then, I find myself absolutely and necessarily determined to live, and talk, and act like other people in the common affairs of life. But notwithstanding my natural propensity, and the course of my animal spirits and passions reduce me to this indolent belief in the general maxims of the world, I still feel such

remains of my former disposition, that I am ready to throw all my books and papers into the fire, and resolve never more to renounce the pleasures of life for the sake of reasoning and philosophy. For those are my sentiments in that splenetic humor which governs me at present. I may, nay I must yield to the current of nature, in submitting to my senses and understanding; and in this blind submission, I show most perfectly my sceptical disposition and principles. * * No: if I must be a fool, as all those who reason or believe anything certainly are, my follies shall at least be natural and agreeable.

The foregoing extracts must suffice for indicating in the main our estimate of Hume on the present occasion, although it differs from that of some able critics.

Hamilton credits Hume with only a negative aim and result. He says "The sceptic, *qua* sceptic, cannot himself lay down his premises; he can only accept them from the dogmatist." * * "Hume was a sceptic; that is, he *accepted* the premises afforded him by the dogmatist and carried these premises to their legitimate consequences. To blame Hume, therefore, for not having doubted of his borrowed principles, is to blame the sceptic for not performing a part altogether inconsistent with his vocation." Now, it should be borne in mind, that Berkely had already destroyed matter, and that Hume undertook to show that, by the same process, or by parity of reasoning, the destruction of mind was inevitable. His fundamental position was expressed thus: "All the perceptions of the human mind resolve themselves into two distinct kinds, which I call *impressions* and *ideas*. The difference betwixt them consists in the degrees of force and liveliness with which they strike upon the mind and make their way into our thought or consciousness. Those perceptions which enter with most force and violence, we may name *impressions*, and under this name I comprehend all our sensations, passions and emotions, as they make their first appearance in the soul. By *ideas*, I mean the faint images of these in

thinking and reasoning." Matter and mind are resolved into a congeries of impressions and their fading pictures, so that the sum total of knowledge is phenomenal and only phenomenal. As already explained, this is nihilism. Hume swept away both matter and mind as substantive realities, and in spite of his utterly discrediting reason, his speculations then took a positive phase, and on the basis indicated in the above extract, respecting "impressions and ideas," he constructed a complete system of the human mind. If the office of a sceptic be purely negative, then Hume was something more than a sceptic, for, unlike Pyrrho, he assumed the aggressive role of a positive constructive philosopher. And so successful was he in this as to reduce the world to the *alternative* of accepting his positive system of phenomenalism or of reconstructing its philosophy, and the most notorious feature of the philosophy of the present is the fact that its votaries mainly fall into two groups, those who stand with Hume in his phenomenalism or positiveism and those who antagonize it and stand with Reid and Hamilton in their realism. Hamilton says: "The dilemma of Hume constitutes, perhaps, the most memorable crisis in the history of philosophy; for out of it the whole subsequent metaphysic of Europe has taken its rise." The actual dilemma was, as I have stated it, the alternative between nihilism and realism or phenomenalism and noumenalism. The battle still rages.

Hume was a Pyrrohonist, but he was more than a Pyrrohonist; he was a sceptic, but he was more than a sceptic; his criticism resulted not only in destructive nihilism, but in constructive nihilism. As a sceptic his aim was destructive and it succeeded in knocking many false props from under knowledge, but his renewal of the daring and sacrilegious attempt to destroy the

temple of knowledge itself, was a failure; yea, his bold assault only resulted in the foundations of knowledge being laid deeper and broader. But as Pascal happily says, and we have seen it illustrated in both Pyrrho and Hume,—"Nature subverts scepticism and reason subverts dogmatism:"

> Truth crushed to earth will rise again,
> The eternal years of God are hers.

The third name mentioned as in the van of nihilism, was that of J. G. Fichte, 1762-1814, A. D. He did not professedly play the role of the sceptic, but his idealistic dogmatism is even a more thoroughgoing nihilism than that of either Pyrrho or Hume. The following remarkable passage from Fichte's "Bestimmung des menschen," tells the whole story:

> The sum total is this: There is absolutely nothing permanent either without me or within me, but only an unceasing change. I know absolutely nothing of any existence, not even of my own. I myself know nothing and am nothing. Images (Bilder) there are; they constitute all that apparently exists, and what they know of themselves is after the manner of images; images that pass and vanish without then being aught to witness their transition; that consist in fact of the images of images, without significance and without an aim. I myself am one of these images; nay, I am not even thus much, but only a confused image of images. All reality is converted into a marvellous dream, without a life to dream, and without a mind to dream; with a dream made up only of a dream of itself. Perception is a dream; thought—the source of all the existence and all the reality which I imagine to myself of my existence, of my power, of my destination—is the dream of that dream.—H's Reid, p. 129*.

Such an utterance as this one of Fichte has on the individual mind a soporific influence and recalls the Nirwana, the Hindoo doctrine of the individual soul's extinguishment by being blown out like a lamp in the phraseology of Buddhism, that ancient system of Nihilism. (Max Muller's Chips, I. 279, 280.)

Travelers sometimes call our attention to a most remarkable phenomenon of nature which we, after the French, call a *mirage*. At one time, it may be the ap-

pearance of pools and lakes of water in sandy and desert places where water is most needed and least likely to occur; at another, it may be a calm flowing water, reflecting from its unruffled surface the trees growing on its banks, while objects in the background assume the appearance of splendid residences amidst groves of trees, or of castles embosomed in a forest of palms with outlying lakes dotted with verdant and beautiful little islands. The illusion is often so perfect in all its circumstances that the most experienced travelers and even the natives of the desert are deluded by it; and an experienced eastern traveler observes, that "no one can imagine, without actual experience, the delight and eager expectation, followed by the most intense and bitter disappointment, which the appearance of the mirage often occasions traveling parties, particularly when the supply of water which they are obliged to carry with them on their camels is nearly or quite exhausted."

"Still the same burning sun! no cloud in heaven!
"The hot air quivers, and the sultry mist
"Floats o'er the desert, with a show
"Of distant waters mocking their distress."

The phantom ship, which the early colonists of our country beheld in the air, as a supposed divine interposition in answer to their earnest cries to heaven for supplies to meet their desperate necessities, was but a mocking mirage. But may we not in all seriousness ask, whether the delusion of those who transmute these empty images into substantial realities is any greater than the delusion of those who change the life sustaining realities of the universe into the splendid mockery of a sceptical mirage. Surely it is a much more pleasing service which the great Shemitic peer of the Aryan Homer, renders, when, in his vision, he holds before us the literal realization of actual blessings as surprising as

the conversion of the illusion of the mirage into a substantial reality:

> Then shall be unclosed the eyes of the blind;
> And the ears of the deaf shall be opened:
> Then shall the lame bound like a hart,
> And the tongue of the dumb shall sing:
> For in the wilderness shall burst forth waters,
> And torrents in the desert:
> And the glowing sand shall become a poll,
> And the thirsty soil bubbling springs.

Let us rather welcome an excess of realism than the hollow and unatural emptiness of nihilism.

In the spring of 1874, James Parton, the well known author, was elected President of the "N. Y. Liberal Club," and on assuming the chair, among other things, said: "Here we are, this human race of ours, tossed upon this round ball of earth, naked and shelterless, sent rolling through space. *Why?*—we don't know; *whence?*—we don't know; and *whither?*—we don't know,—that is to say, I don't know. If there are any here so fortunate as to know, I tender them my respectful congratulations. But for my own part, I only clearly know that I don't know."

This is the inevitable outlook of faithless nihilism. No wonder that its gloom, which horrified the mind of Hume, should bewilder a Parton.

II. REALISM:

We now turn our thought from the dreary chaos of nihilism and seek a firmer footing upon the continent of realism. I have often thought of an incident when I was a college student. A letter was received from one of the last graduating class, giving a discription of his experience in a new line of study. "Yes boys," said George, "I am studying Hebrew; but I feel like a blind sheep in a millpond, for I can neither see shore nor touch bottom." The fact was, George was not a very

apt scholar in language; the difficulty was subjective and not objective, for this language is remarkable for its simplicity and perfection. And thus it is that the nihilist flounders, for to him the moral and physical reality, order and beauty of nature are a chaos—

> "A dark
> Illimitable ocean, without bound,
> Without dimension, where length breadth and height,
> And time and place, are lost; where endless night
> And chaos, ancestors of Nature, hold
> Eternal anarchy."

It is important at this point to recall the view that consciousness is the great storehouse of the materials, the fountain of the stream, the Bible of Philosophy. Consciousness is sometimes vaguely and popularly used for what may at any time have been a distinct matter of knowledge, as, I am not conscious of ever having made the remark attributed to me; and then, it has been understood in the too narrow sense of a particular faculty coordinate with other particular faculties and whose function or office it is to take note of their operations; whereas, the better view esteems consciousness as the root of our intelligence, so that the particular powers are only the modifications or sharers in common, each in its measure, of its vitality and energy. This generic view as distinguished from the popular and specific views, seems to define the nature of this canon of philosophy. But the nature and the sphere of the activity of this generic function of our intelligent being, may, for reasons which cannot now be canvassed, be viewed as threefold, i. e., (1) phenomenal, (2) noumenal and (3) inferential. However, as some limit consciousness entirely to the facts or phenomena of experience, the word intuition, which means the power of the immediate vision of truth on the apprehension of its evidence, whether that

evidence be direct or mediate, may with propriety be made to do duty in this tripple service; and then, our phenomenal intuition will coincide with consciousness and the noumenal and inferential intuitions will be distinctive. The bearing of this will be evident farther on, for as thus defined, intuition rather than consciousness is the true and valid criterion of philosophy. Of course the operation of intuition, like that of every other power, has its root in consciousness; but it is something more than consciousness, just as each specific power is consciousness *plus* a defferential element, as memory, thought, imagination, feeling, will, to all of which consciousness stands in common relation and each of which has its characteristic and discriminating form of energy. Consciousness is not coextensive either with mind or with mental activity.

The facts of consciousness have two aspects, as they are viewed simply as phenomenal appearances in some sense or other, or as they are viewed as evidencing somethiug other than themselves. It is the province of metaphysics to consider at large these facts of consciousness, subjectively or internally in relation to the mind knowing, and objectively or externally in relation to the things known. Psychology is the science of both classes of these facts of consciousness, as such, *inter se*; but ontology deals with these facts in relation to realities existing out of consciousness. When these facts are vacated of all substantial import, the world is an empty plantasmagoria and the result is nihilism; when credited with substantive validity, in whatever measure, a corresponding realism is the result.

As a matter of fact we have three specific forms of realism, viz., the unitarian, the dualistic and the theistic. Each of these must be briefly expounded.

1. Unitarian realism. This holds that the phenomena of consciousness, which are constitutive of the primary fact of knowledge, reveal substantial reality, but that this reality is one and single. There are three varieties of this unitarian form of realism. The first is idealism, which makes mind the only substance; the second is materialism, which makes matter the only substance; and the third is that of absolute identity, which views the properties of both mind and matter as the common properties of one supreme and all-comprehending substance. Each of these views will now receive a brief notice and in the order named.

(1.) The first, then, is idealism, according to which the one and only substantial reality is mind. The existence of mind, as a thinking substantive reality, is placed beyond doubt by a very simple enunciation. Let us drop the reins on the neck of doubt; and, without shrinking or reservation, boldly doubt of everything—of the existence of God, of the external world, doubt our own existence. But when it is said that all things are doubted, it is manifest that the doubt itself is excepted which did put all things else in subjection. It is obviously impossible to overthrow this doubt itself, for if you doubt of it, your doubting still remains as an ultimate and insuperable fact. But doubting is conscious thinking,—is a fact of consciousness. Now, to utilize a distinction just made and which is believed to be one of importance, as this act of thinking stands in the eye of phenomenal intuition, so the thinking self is cognized, not by inference from this fact, but directly, instantaneously, and necessarily by a power of the mind which I have ventured to call the noumenal intuition. As ordinarily interpreted, we cannot be conscious of self but only of the mental modification

through which self is mediately known or inferred: just as we are not conscious of our mental powers themselves, but only of their actions: whereas, there seems evidently to be an endowment directly cognizing self *and* its powers, as the logical antecedant or apriori condition of intuiting their operations, and this endowment is made distinctive and intelligible by designating it the noumenal intuition. However, if the function of consciousness itself be extended so as to embrace it, very well, provided it is understood.

This exposition covers the ground of Descartes' *Cogito, ergo sum.* This expression is sometimes viewed as an enthymeme, or syllogism with one premise suppressed; and by supplying it, the full argument would be: *whatever thinks exists*; I think; therefore, I exist. But the major premise, *whatever thinks exists*, is an abstract universal proposition, and therefore it is not in its primary and spontaneous form. The necessity and immediacy of the conjunction of thought and self are just as imperative in the original and concrete particular act of consciousness and intuition, as in the abstract universal form of reflection and logic. The *ergo* evidently leads away from the original concrete fact, in its spontaneous and intuitional form, to its scientific and formulated phase; just as the proposition, *every change must have a cause*, is not the original fact of intuition in its spontaneous form. The original judgment contemplates only an individual concrete change, as necessarily referable to an antecedent and adequate action of force; and the universal proposition is not properly a generalization upon a multitude of instances, but merely the unlimited statement of what is found true in every instance of a change. The repetitious instances do not furnish the particulars of an induction, but only particular illustra-

tions of the same identical primitive concrete judgment, so that reflection converts the concrete psychological judgment, by abstraction, into the universal logical judgment. Just so, *I think and I exist* is the primary concrete and complex psychological intuition; but the proposition taken as the major premise of Descartes' syllogism, *whatever thinks exists*, results from reflection and abstraction, but not from generalization, in the empirical sense, which can only enunciate what is and not what must be.

If I am asked how I know that I exist? and answer that I am conscious of it, the answer is seen, in the light of the foregoing exposition, to be valid and beyond the reach of doubt. A fact of phenomenal and of noumenal intuition may be explained and illustrated, but can neither be proved nor disproved; it is not amenable to logic, but only to common sense; and logic itself is possible, only on the assumption of the priority of the existence and authority of such realities.

Realism, then, has a sure footing, as to the substantial reality of self, which is the veritable warp of knowledge, however diverse and party colord may be its woof. The fact of human thought is assumed in all systems of philosophy, in all sciences and in all experience whether in self communion, in man's intercourse with man or with all things other than self. This substantial self-hood, which refutes and survives all nihilism, is literally our *pou sto*, a sure footing in the domain of reality, to which we gravitate by the necessities of our rational nature and from which all imagined escapes are illusory self-deceptions. Self is the terra firma of thought, from which our rational nature can no more escape than our bodies from the operation of the law of gravitation.

Now, what has just been set forth is the truth, but it is not the whole truth. Idealistic unitarian realism admits only the real or substantial existence of mind, but denies the substantial existence of matter. A few citations from Bishop Berkeley will complete all that need be said at present on this point:

> The table I write on, I say, exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it. * * This is all that I can understand by these and the like expressions. For as to what is said of the absolute existence of unthinking things without any relation to their being perceived, that seems perfectly unintelligible. Their ESSE is PERCIPI, nor is it possible they should have any existence, out of the minds or thinking things which perceive them.
>
> It is indeed an opinion flagrantly prevalent amongst men, that houses, mountains, rivers, and in a word all sensible objects have an existence natural and real, distinct from their being perceived by the understanding. But with how great an assurance and acquiescence soever this principle may be entertained in the world; yet whoever shall find in his heart to call it in question, may, if I mistake not, perceive to involve a manifest contradiction.
>
> Some truths there are so near and obvious to the mind, that a man need only open his eyes to see them. Such I take this important one to be, to-wit, that all the choir of heaven and furniture of the earth, in a word all those bodies which compose the mighty frame of the world, have not any subsistence without a mind, that their being is to be perceived or known; that consequently so long as they are not actually perceived by me, or do not exist in my mind or that of any other created spirit, they must either have no existence at all, or else subsist in the mind of some eternal spirit: it being perfectly unintelligible and involving all the absurdity of abstraction, to attribute to any single part of them an existence independent of a spirit. To be convinced of which the reader need only reflect and try to separate in his own thoughts the being of a sensible thing from its being perceived.
>
> From what has been said, it follows, there is not any other substance than SPIRIT, or that which perceives.

Bishop Berkeley is acknowledged to be a representative idealistic realist, and the language of these extracts is too explicit to admit of any question that, whilst he gave to the external world a phenomenal and appa-

rent reality, he utterly denied its non-spiritual substantial reality and held that "there is not any other substance than spirit." But in his mind there was no question about the individual substantial reality of an infinite spirit or God, and of finite spirits. Matter is a phenomenon of mind.

(2.) The second form of unitarian realism goes to precisely the opposite extreme and holds that "there is not any other substance" than matter. Materialism, consequently, is the name by which this second form of unitarian realism is most familiarly known. As in idealism, or philosophic spiritualism, all the phenomena of matter are explained away as phenomena of mind, so in materialism, all the phenomena of mind are explained away as phenomena of matter. The unitarian psychologists reach this result by explaining all knowledge as consisting of transformed sensations, whether the philosopher's stone, by which this magical transmutation is effected, be the reflection of Locke, the association of others, or the two combined. *Nihil est in intellectu quod non fuit prius in sensu*—there is nothing in the intellect which was not previously a sensation. This is the accepted axiom of all such as hold this view. This adage is their only and universal rule for interpreting, translating and transforming the facts of consciousness. It has been wittily observed of the associational psychologists, that "whenever one of their fundamental assumptions is contradicted by the experience of manhood, it is easy to say that in infancy—a period of which anything can be affirmed, since nothing is remembered—it was strictly true. This is certainly making the most of early years. The small child is put into the association mill, and after a little brisk grinding is brought out with a complete set of mental furniture.

When the critic reaches the spot he is blandly told that the work is done, and the machinery put away. He is further warned that any search on his part will be useless; as the traces of manufacture have been entirely obliterated." The cultivators of various branches of physical science are much given to this materialistic realism. In that little book entitled "The Unseen Universe," which made a sensation at the time of its anonymous publication, but which is now known to be the joint product of the distinguished physicists Stewart and Tait, the case is put in the following striking language:

> Is there not, therefore, a reality about matter which there is not about mind? Can we conceive a single particle of matter to go out of the universe for six or eight hours and then to return to it; but do we not every day "see our consciousness disappearing" in the case of deep sleep, or in a swoon, and then returning to us again? Far be it from us to deny that we have something which is called consciousness, and is utterly distinct from matter and the properties of matter, as these are regarded in Physics. But may not the connection between the two be of this nature?—When a certain number of material particles, consisting of phosphorus, carbon, oxygen, hydrogen, nitrogen, and perhaps some others, are in consequence of the operations of their physical forces, in a certain position with respect to each other, and in a certain state of motion, consciousness is the result, but whenever this connection is brought to an end, there is also an end of consciousness and the sense of individual existence, while however the particles of phosphorus, carbon, etc., remain as truly as ever.
>
> Now this means that matter must be looked upon as mistress of the house, and consciousness as an occasional visitor whom she permits to take of her hospitality, turning him out of doors whenever the larder is empty. It is worth while to investigate the process of thought which gives rise to this curious conception of the economy of the universe.

In his work on the "Diseases of the Nervous System," which is widely circulated among the medical profession, Dr. Hammond "looks at the brain as a complex organ evolving a complex force—the mind." Again he says:

> The mind, therefore, as before stated, is a compound force evolved by the brain, and its elements are perception, intellect,

emotion and will. The sun likewise evolves a compound force, and its elements are light, heat and actinism. One of these forces, light, is again divisible into several primary colors, and the intellect of man, one of the mental forces, is made up of faculties. It would be easy to pursue the analogy still further, but enough has been said to indicate how clearly the relationship between brain and mind is that of matter and force.

The false intellectual conception is then a fixed result of the altered brain tissue, and is just as direct a consequence of cerebral action as is a thought from a healthy brain.

My own idea of insanity is based entirely on the fact, that as the healthy mind results from the healthy brain, so a disordered mind comes from a diseased brain.

In Vol. I, of Prof. Flint's Physiology, the following admirable passage from Longet is quoted with approval:

In his psychical relations, but in these only, man can constitute a distinct kingdom. Physiology has especially in view the acts which assimilate man to animals; it belongs to psychology to study and make known the faculties which separate him from them.

In Vol. IV, published a number of years later, it is laid down in the text, p. 377, "that there is and can be no intelligence without brain substance. * * * The brain is not, strictly speaking, the organ of the mind, but the mind is produced by the brain substance."

Dr. Maudsley criticises the proposition of Cabanis, "that the brain secretes thought as the liver secretes bile," because, he says, mind, the product of brain action, cannot, like bile, the product of liver action, "be observed and handled and dealt with as a palpable object." * * * "Nevertheless," he states, "it must be distinctly laid down, that mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure." It would seem, then, that Cabanis and Hammond and Flint and Maudsley, not to extend the list, hold substantially the same view of mind, as a mere phenomenal function of the nervous tissue.

At death the stomach will cease to secrete gastric juice, the liver will stop secreting bile, and nerve tissue—"brain substance" — will no longer functionate and evolve mind—a consequence too grave to be passed in silence and yet too obvious to escape the attention of the most unwary. But it is the object, in this connection, only to submit a statement without argument: and hence it is proper to mention to you, that in a thesis on the "Dual Constitution of Man," which thesis is accessible to you, I have canvassed this precise issue, as to the relation of mind to our nervous organism, and shown that it is not a function but a functioner of nerve force.

Prof. Huxley says: "There is every reason to believe that consciousness is a function of nervous matter." —(Huxley's Crit. and Add., 250.)

Prof. Tyndall says: "Besides the physical life dealt with by Mr. Darwin, there is a psychical life presenting similar gradations, and asking equally for a solution. * * I descern in that matter which we have hitherto covered with opprobrium, the promise and potency of all terrestrial life."—(Belfast Address revised by author, pp. 80 and 89.)

The year after Descartes' death, Thomas Hobbes of Malmesbury (1588-1679) published the work from which the following citations are made:

Seeing the foundation of all true Ratiocination, is the constant Signification of words. * * * I will begin with the words Body and Spirit, which in the language of the Schools are termed, Substances, Corporeall and Incorporeall. The Word Body, in the most general acceptance, signifieth that which filleth, or occupieth some certain room, or imagined place. * * * The same also is called Substance, that is to say, Subject to various accidents. * * And according to this acceptation of the word, substance and Body signifies the same thing; and, therefore, Substance incorporeall are words, which when they are joined together, destroy one another, as if a man should say, "An Incorporeall Body."

But Hobbes had pursued his studies in Paris, where

he was in constant intercourse with Gassendi (1592-1655) who attempted the revival of Epicureanism and is "styled the renewer in modern times of systematic materialism." The influence of these two names, for more than two hundred years, over the minds of those who have sympathized with or repeated their futile attempt to solve the problem of knowledge by clothing matter with the attributes of mind, thus cutting instead of untying the Gordian knot, has transcended consciousness and computation.

(3.) The third form of realistic unitarianism possesses a present interest, exceeding that of either of the other two forms. Those who stand on this ground do not attempt to destroy the substantiality of matter by making it a phenomenon of mind, as did the idealistic Berkeley; nor the substantiality of mind by making it a phenomenon of matter, as did the materialistic Hobbes; nor the annihilation of substantiality, as did Hume; but they maintain the hypothesis of a common substance to which belong equally the properties of matter and of mind. This view is very plainly set forth as the one which is maintained by Bain's work on "Mind and Body," in Appleton's International Scientific Series. He says, in the concluding paragraph of that work:

> The arguments for the two substances have, we believe, now entirely lost their validity; they are no longer compatible with ascertained science and clear thinking. The one substance, with two sets of properties, two sides, the physical and the mental, a double-faced unity, would appear to comply with all the exigencies of the case.

It is in this immediate connection that we must locate the philosophy of Herbert Spencer. As in the case of others, I will give you the opportunity to judge of his views from some of his own utterances, carefully and fairly selected. He says:

> The noumenon every where named as the antithesis of the

phenomenon, is, throughout, necessarily thought of as an actuality. It is rigorously impossible to conceive that our knowledge is a knowledge of appearances only, without at the same time conceiving a reality of which they are appearances; for appearance without reality is unthinkable.—First Principles, 2d ed., § 26.

We come down then finally to force as the ultimate of ultimates. * * Matter and motion, as we know them, are differently conditioned manifestations of force.—Ibid. §50.

Forces standing in certain relations, form the whole content of our idea of matter.—Ibid. §48.

The name you give me [materialist] is intended to imply that I identify mind with matter. I do no such thing. I identify mind with motion.—Psychology, 2d edi., § 271.

Here then we have force, in Spencer's own and unequivocal language, as ultimate and as standing in common relation to matter and mind, which are its conditioned manifestations; force, therefore, is the noumenon of which matter and mind are the phenomena and this force is with Spencer that ultimate reality in which subject and object are united.

And this brings us, he continues, to the true conclusion implied throughout the foregoing pages—the conclusion that it is one and the same Ultimate Reality which is manifested to us subjectively and objectively. For while the nature of that which is manifested under either form proves to be inscrutable, the order of its manifestations throughout all mental phenomena proves to be the same as the order of its manifestations throughout all material phenomena.

The law of Evolution holds of the inner world as it does of the outer world. On tracing up from its low and vague beginnings the intelligence which becomes so marvellous in the highest beings, we find that under whatever aspect contemplated, it presents a progressive transformation of like nature with the progressive transformation we trace in the Universe as a whole, no less than in each of its parts.—Psy. 1, § 273.

The last extract which will be brought forward is the closing language of First Principles:

Manifestly, the establishment of correlation and equivalence between the forces of the outer and the inner worlds, may be used to assimilate either to the other; according as we set out with one or other term. But he who rightly interprets the doctrine contained in this work, will see that neither of these terms can be taken as ultimate. He will see that though the relation of subject and object renders necessary to us these antithecal conceptions of Spirit and Matter; the one is no less than the other to be regarded as but a sign of the unknown Reality which underlies both.

You see, then, that matter and mind are with Spencer, the two Janus faces of force; his hypothesis is something more than a dynamical view of the material world, for he reduces mental phenomena to the same root.

There is, he says, a fundamental connection between nervous changes and psychical states.

You think of me as seeing no essential difference between mind and the material properties of brain. As well might I think of you as seeing no essential difference between music and the material properties of the piano from which it is evoked. * * * As the motion given to an automatic musical instrument passes through its specialized structure and comes out in the form of particular combinations of aerial pulses, simultaneous and successive; so the motion locked up in a man's food, added to that directly recieved through his senses, is transformed while passing through his nervous system into those combinations of nervous actions which on their subjective faces are thoughts and feelings.

Thus, impossible as it is to get immediate proof that feeling and nervous action are the inner and outer faces of the same change, yet, the hypothesis that they are so, harmonizes with all the observed facts.—Psy. 1, pp. 128, 129, 621-22.

Bear in mind that force is ultimate, that it is "that reality of which matter and mind are the opposite faces"; the phenomena of consciousness and of matter, "a shock in consciousness and molecular motion, are the subjective and objective phases of the same thing." Certainly sufficient evidence has been given, to justify our classification of this philosophy. Sometimes a classification is a virtual refutation.

Herbert Spencer is the recognised philosopher of evolution; he is the queen bee of the development hive and all the others, as Tyndall, Hæckel, Huxley and Darwin himself, are but working subordinates; Darwin is his great pack-horse naturalist; Huxley, his ungloved champion, hitting out from the shoulder miscellaneously; Tyndall and Hæckel and others are hewers of wood and drawers of water, whilst a numerous group of youth are acting as industrious blowers and strikers. But the

"great philosopher," as Mr. Darwin calls him, is the Vulcan of this smithy under the patronage of the gods, superior and inferior,of modern science,wherein mechanical force is transmuted into breathing forms and burning thoughts. Of late, as never before, his claims as the originator, formulator and philosopher of the revamped development hypothesis, known as Darwinism, are obtruded on the public as quite eclipsing the more modest and meritorious claims of Darwin himself.

But the smoke of battle has somewhat cleared away, reason has become calm and resumed the helm, and the outlook reveals the indisputable fact that spontaneous generation and the missing links are the sylla and charybdis between which no divine counsel nor guidance has enabled this Ulysses to steer his barque. The passage has not yet been made; and the philosophy of nescience seems after all not to know the way out of the fog

The world usually proves to be discriminating and just, and our age will no doubt be looked back upon by the future as having aided but not as having superceded its own thinking. There has been all along a solid phalanx of scholars, scientists and thinkers in America, ready to accept of every contribution to science, from whatever source, but capable of distinguishing between facts and opinions, science and philosophy, and whose minds have never been bewildered by the glamour of Mr. Spencer's bold pretensions. Such men, as Henry and Guiot and Dana and Agassiz and Dawson, never gave in their adhesion; and Joseph Cook, the noted Boston Lecturer, in speaking, 1877, of Harvard, used this language :

> There is a school of rather small philosophy in Cambridge yonder, among a few young men, who, very unjustly to Harvard, are supposed by large portions of the public to represent the University. I happen to be a Harvard man, if you please, and ought

to know something of my alma mater. There is not a paving-stone or an elm tree in Cambridge that is not a treasure to me. Who does represent Harvard? Hermann Lotze and Frey and Beale rather than Herbert Spencer and Hæckel are the authorities which the strongest men at Cambridge revere.

And in the same course he thus speaks of Lotze:

Hermann Lotze, now commonly regarded as the greatest philosopher of the most intellectual of the nations, and who has left his mark on every scholar in Germany under forty years of age, is every where renowned for his physiological as well as for his metaphysical knowledge, and as an opponent of the mechanical theory of life. Hermann Lotze holds that the unity of consciousness is a fact absolutely incontrovertible and absolutely inexplicable on the theory of Mr. Spencer, that we are woven by a complex of physical arrangements and forces, having no coordinating power presiding over them all.

And he also says, in this last connection, that "there is not in Germany to-day, except Hæckel, a single professor of real eminence who teaches philosophical materialism."

Yes it is safe to notify our youth, that this Spencerian phase of unitarian realism has culminated and is now waning; and that the task, henceforth, will be to justly appreciate and profit by its contributions and its failure.

The hypothesis of absolute unitarian realism was perhaps never more simply and ingeniously conceived and enunciated than by Benedict Spinoza, a Holland Jew (1632—1677,) who declined salaried and honorable appointments and preferred to subsist by his own manual industry, rather than by implication to compromise his perfect freedom of thought. He has been called a reasoning mill; his procedure was deductive from his definition of substance, as "that which exists *in se* and is conceived *per se*," i. e., that only is substance which is self-existent and single. Postulating that in the nature of the case only substance and its qualities or modes can exist; also, that only things of the same kind can limit each

other: then, thought and extension would only be empty abstractions, unless referred as attributes to the self-existent substance which, by virture of being the only thing of its kind, is unlimited and, hence, infinite and eternal.

This substantive being, then, involves as attributes, infinite thought and infinite extension; these attributes involve an infinite number of finite determinations, and these determinations constitute the phenomenal world; those of the infinite thought giving rise to finite minds, those of the infinite extension to all material existences. Hence all things are but modes of the attributes of this infinite Being.

The philosophy of the absolute, convinced that mere phenomena cannot be self-existent realities, begins by inquiring after the principle from which they spring, the uniform and unchangeable basis which underlies all changing appearances. This philosophy has played a great part in the scientific history of the world. It formed the basis of the ancient speculations of the Asiatic world. It characterized some of the most remarkable phases of early Greek philosophy, particularly that of the Eleatic school (600 B.C.), founded by Xenophanes the monotheist, but his monotheism was pantheism Plato, with all the lofty grandeur of his sublime spirit, sought for the absolute in the archetypes existing in the divine mind. The Alexandrian philosophers proposed to themselves the same high argument; mingling their theories with the mysticism of the east, and even calling to their aid, the lights of the Christian revelation. In more recent times Spinoza gave currency to similar investigations, which were soon moulded into a stern and unflinching system of pantheism; and in him we see the model upon which the modern idealists of Germany have renewed their search into the absolute ground of all phenomena. The very first requisite, therefore, in understanding the rationale of the German philosophy is to fix the eye of the mind on the notion of THE ABSOLUTE, and thus to pass mentally beyond the bounds of changing, finite, conditioned existence, into the region of the unchangeable, the infinite the unconditioned. It is, in fact, in the various methods by which it is supposed that we are conducted to the absolute, whether by faith, intuition or reason, that the different phases of the German metaphysics have arisen.—Morell's Hist. Mod. Phil. 411.

Among these German systems, those of Schelling and Hegel have been most conspicuous in maintaining "that mind and matter are only phenomenal modifications of the same common substance."

2. Dualistic realism. This is the second generic form of realism, according to the analysis and enumera-

tion already given. The views under this head are also diverse, but they may be arranged in two groups,—(1) that of bastard dualism, and (2) that of legitimate dualism. That, however, which is characteristic of dualism is its intuition of the substantial reality of both mind and matter, as coexistent and distinct substances, each having its own attributes and laws of subsistence and operation. The oriental dualism of Zoroaster, which invaded the thought of Europe at the time of the transition from the old to the new civilization, has no significance in this special connection, however curious, important and indispensable it may be in the appreciation of the ethical, religious and speculative opinions of the early centuries of our era.

(1.) The three forms of spurious dualistic realism which may be now noticed are represented by Descartes, Leibnitz and Brown.

Descartes (1596-1650) was a Frenchman and excogitated his peculiar system of philosophy whilst on duty as a soldier. His mathematical genius placed under obligation all succeeding generations; but by striking out a new method in philosophy, he associated his name with that of Socrates and became the father of our modern philosophy. His system lives only as a curiosity, but his method of appealing directly to consciousness as affording an impregnable base of operations, survives and is not destined to perish.

In regard to the substantial objects of existence, Descartes recognized one self-existent and self-sufficient substance, God, and then matter and mind as derived and dependent, or created substances. These substantial entities we could not know except by virtue of their possession of attributes; each substance has its chief property, which constitutes its nature and essence, and

to which property all others are referred. Extension in length, breadth and depth, constitutes the nature of corporeal substance, and thought constitutes the nature of thinking substance. Every other thing which can be attributed to body presupposes extension and is only some mode of an extended thing; as also the things which we find in the mind, are only diverse modes of thinking. And so we can easily have two clear and distient notions or ideas, one of a thinking substance, another of a corporeal substance, provided we accurately distinguish all the attributes of thought from the attributes of extension. (Principia, I, LI-LIV.)

This is about his own language; and we get at the heart of his system by observing that mind and matter, whose very natures are constituted of thought and extension, whilst coexistent and most intimately related, yet like two gasses mechanically mixed, do not influence each other. The pineal gland was made the seat of the soul, but the relation of body and soul is one of non-intercourse. This presents a striking double contrast to the two opposite extremes—that of Spencer's conversion of food into thought and that of Berkely's conversion of all corporeal things into ideas which ideas man eats and wears. The correspondence of the activities of soul and body is brought about by the direct agency of God, as each furnishes occasion; or, as another has expressed it: "It is God himself who by a law which he has established, when movements are determined in the brain, produces analogous modifications in the conscious mind. In like manner, suppose the mind has a volition to move the arm; this volition is, of itself inefficacious, but God in virtue of the same law, causes the answering motion in our limb. The organic changes, and the mental modifications, are nothing but simple conditions and are not

real causes; in short they are occasions or occasional causes."

Leibnitz (1646-1716) was a German of amazing versatility, originality, breadth and depth of intellect. His brilliant speculation as to the constitution of mind and matter is known as the system of preestablished harmony, and was occasioned apparently by the system of Descartes. He teaches, in his system, that compound bodies are made up of monads which are the ultimate elements, the dynamical atoms; that each soul is a monad and each monad is a miniature universe, having its inherent or immanent qualities and its sphere and series of allotted activities. Matter and mind thus constituted were, at the beginning, wound up like two clocks, to run forever in perfect harmony. All the contingencies of the universe were anticipated and provided for by its great author, and the involution of energy and intelligence was made equal to the possible evolution. The fact is, Leibnitz so far anticipated Spencer and Darwin in some fundamental features of their speculations, that it has attracted some attention. According to this system:

> God created the soul at first in such manner that it understands and represents to itself in corresponding order whatever passes in the body; and the body also, in such a manner that it must do of itself whatever the soul requires. Between the two substances which constitute this man, there would subsist the most perfect harmony. It is thus, no longer necessary to devise theories to account for the reciprocal intercourse of the material and spiritual substances. These have no communication, no reciprocal influence. The soul passes from one state, from one perception to another by virtue of its own nature. The body executes the series of its movements without any participation or interference of the soul therein. (Opera, ed. Erd., 520, a, et al.)

Again he says:

> I will not make a difficulty of saying that the soul moves the body; even as a Copernican speaks truly of the rising of the sun, a Platonist of the reality of matter, a Cartesian of the reality of sensible qualities, provided one understands them judiciously. I

believe, in like manner, that it is very true to say that substances act the one upon the other, provided it is understood that the one is a cause of the changes in the other, in consequence of the laws of their preestablished harmony. (Erd., 132, a.)

That is, it is proper to use this language of ordinary life, provided you understand by it something entirely different from what is ordinarily understood by it, for body and soul, according to Leibnitz, have really less influence on each other than two separate clocks vibrating near each other. The feeling of joy in the heart and the smile on the face, fear and palor, all corresponding bodily and mental states, are, according to this view, mere coincidences. I will translate for you another of his own brief expositions of his peculiar system, given in a letter just twenty years before his death and six years subsequent to his first formal disclosure of his system to Arnauld:

You say that you do not understand how I would be able to prove what I have advanced touching the communication or harmony of two substances so different as the soul and body. I truly believe that I have found the means of doing so: and behold how I undertake to satisfy you.

Figure to yourself two clocks which perfectly agree. Now that can be effected in three ways. The first consists in a mutual influence; the second is by assigning to them a skillful workman who may regulate them and put them in accord at every moment; the third is to make the two pendulums with so much art and exactness that one may be assured of their agreement everafter. Put, now, the soul and the body in the place of these two pendulums; their agreement can occur in one of these three ways. (1) The way of influence is that of the vulgar philosophy, but as one could not conceive of material particles which can pass from one of these substances into the other, it is necessary to abandon this belief. (2) The way of the continual assistance of the Creator is that of the system of occasional causes; but I hold that this is to make intervene a "Deus ex machina"—an artificial stage god—in a thing natural and ordidary, where, according to reason, God ought to co-operate only in the manner that He concurs in all other things natural. (3) Thus there remains only my hypothesis, that is to say, the way of harmony. God made, at the beginning, each of these two substances with such a nature that by following only its own proper laws, which it has received with its being, it accords in every respect with the other just as if there was a mutual influence or as if God continually extended to them an

influence beyond his general concurrence. Consequently, I have no need of proving anything, unless some one require that I prove that God is sufficiently skilful to employ this prevenient artifice of which we see some sparks even among men. Now, granting its possibility, you see that this [third] way is the most beautiful and the most worthy of him.

You have suspected that my explication would be opposed to the idea so different which you have of spirit and body; but you see in an instant that no one has better established their independence. For as long as one was obliged to explain their communication as miraculous, occasion has always been given a good many people to fear that the distinction between soul and body might not be as real as supposed, since the support of it is so far-fetched. I will not be displeased at your sounding persons of distinction upon the thoughts which I have just explained to you. —(Ibid. xxv.)

It should be observed that Descartes is not himself wholly responsible for what is here criticised as the Cartesian doctrine of assistance or occasional causes, as Malebranche and others endeavored by this shift to bring into consistency such of his views as that of animal organisms being soulless machines and of providence being a continual creation: *la conservation et la creation ne different qu'au regard de notre façon de penser, et non point en effet.* (Descartes' Oeuvres, ed. Simon, p. 93.) They judged that we experience sensations because God causes them to arise in the soul, on the occasion of the movements of matter, and when, in its turn, the soul wills to move the body, that it is God who moves the body for it. In like manner, the movements among bodies themselves is effected by God moving one body on occasion of the movement of another body. (Erd. 127.) Descarte's own view that the soul exercised a directive influence over the body and was susceptible of the action of the animal spirits (Les Pass., pt. 1, § 34) was lost sight of by his followers; and yet Leibnitz repetitiously appeals to his mathematics, in which he was the compeer of Newton and of Descartes, to prove the paralogism that the quantity of direction is as fixed in the un-

iverse as that of moving force, so that bodies must be just as independent of the soul in their direction as in the quantity of their moving force; and he even goes so far as to express the opinion that if Descartes had known of this, as he terms it, new law of nature as to direction, he would have been led to the discovery of the system of pre-established harmony. By the modified Cartesian system, all efficiency was abstracted from both mind and matter and the only efficient operative energy was that of God, who so timed and regulated his action in the lines of material and of mental phenomena that they as perfectly accorded as if each, by its own susceptibility, responded to the efficiency of the other. Whereas, in the system of Leibnitz, this responsiveness or accordance was equally perfect but it was by virtue, not of any present influence of God on either mind or matter, nor of any influence of either on the other, but wholly on account of the original constitution and store of energy lodged in mind and matter at their creation. He frequently objects to the Cartesian system that it makes God a sort of stage convenience, for the denouement of the piece by moving the body, as the soul wills, and giving peceptions to the soul, as the body requires; and that thus, in a most unphilosophic manner, a perpetual miracle is performed in maintaining the ostensible intercourse of these two substances. However untenable the Cartesian system itself may be, I must be allowed to quote with approval the apt reply of Bayle, in the article of his Dictionary on Rorarius, that nothing can properly be called a miracle which is brought about as an instance of an established method of procedure, i. e., according to law. He says: "The system of *occasional causes* does not bring in God acting miraculously. I am as much persuaded as ever I

was," he continues, "that an action cannot be said to be miraculous, unless God produces it as an exception to general laws; and that everything of which he is immediately the author according to those laws, is distinct from a miracle properly so called":—i. e., as it was esteemed by the Cartesian, God's ordinary mode of operation could not in whole nor in part be properly termed miraculous. I will add that those who speak of the miracle of creation, talk wildly, for a creation is not a miracle: a miracle implies, first, an established order of nature, whereas creation, if it mean anything, does not presuppose but initiates that order; and second, a miracle implies a departure from or interruption of the order of nature, whereas, in creation, there is not yet any order to be interrupted. Hence, to talk of the miracle of creation is to talk nonsense,—I mean that it is to use language to which no intelligible meaning can possibly attach, because of the confusion of thought necessarily implied. The fact is, for precisely opposite reasons, no such thing as a miracle was possible upon the hypothesis of either Descartes or Leibnitz.

To the objection urged against his own system, that it was an extraordinary affair and had too little of God, whilst he charged that Cartesianism had too much of God, Leibnitz made answer:

> But I admit the supernatural only at the beginning, at the first formation of things; after that, the formation of animals and the relation between soul and body, are as natural as the most ordinary operations of nature. (Opera, edit. Erd., p. 476, a.)

The only question, in his view, was as to the competence and wisdom of God in so constituting the elements or monads of the universe with dynamic powers, with immanent attributes, as to place the resources of Deity under no farther requisition. It is easy to see, under the Cartesian wing of these speculations, the egg

of Pantheism, and under the Leibnitzian wing, the egg of Atheism, both of which were hatched subsequeutly. As a matter of fact, Spinoza, stopping short with Descartes' definition of substance as a being self existent and self sufficient, rejected his qualifications respecting created substances and left God alone as the sole existent and efficient substance; and Leibnitz, to escape this consequence of the obliteration of the inherent efficiency of second causes, grandly assumed that God made the universe at its creation the depository of immanent power, wisdom and all attributes adequate to all its necessities and contingencies, as it should ever after flow outward and onward in the commingling but entirely distinct and perfectly accordant streams of physical and psychical life,—thus removing God so far from view as to be forgotten, and investing the universe with so much of God as to be substituted by evolutionism in his place. Pantheism has always amounted to the denial of any efficient finite substance; and Atheism, to the denial, or removal out of view and recognition, of any efficient infinite substance; but these extremes meet in Atheism, for if all things are God there certainly is no God. This, however, is an anticipation of theistic realism.

Leibnitz's own estimate of his system of dualistic realism, in which mind and matter stand so peculiarly correlated, is characteristic and points a moral of value to even the most gifted. From being a Cartesian (Erd. p. 48,) and then leaning to the pantheistic views of Spinoza (p. 206), an article in Bayle's Dictionary on Rorarius seems to have aided in causing a recoil which carried Leibnitz back through the camp of the Cartesians into the paradise of his newly discovered pre-established harmony. Thenceforth he assumed the sobri-

quet of Theophilus, the friend of God instead of Spinozan Atheist, and from his new standpoint, he looked down on all other and, as he esteemed them, inferior systems with an air of supreme satisfaction and complacent triumph, indicated in the following passage in dialogue from the first chapter of his elaborate criticism of Locke's "Essay on Human Understanding:"

I must tell you as news," he says in the character of one of the interlocutors, "that I am no longer a Cartesian, and that I am farther than ever removed from your Gassendi. I have been struck with a new system which puts a new face on the interior of things. This system seems to ally Plato with Democritus, Aristotle with Descartes, the Scholastics with the Moderns, Theology and Ethics with reason. It seems to take the best from all sides and to go far beyond what has been hitherto attained. I find here an intelligible explanation of the union of soul and body, a thing of which I had previously despaired. * * * I see now what Plato meant when he took matter for an imperfect and transitory existence; what Aristotle understood by his entelechy; what is the promise of another life, which, according to Pliny, Democritus himself was accustomed to make; how far the Sceptics were reasonable in declaiming against the authority of the senses; how animals are automatons according to Descartes and yet have souls and sentiment according to popular opinion; how various others with a show of reason attributed life and perception to all things; how the laws of nature, of which a good part were unknown before the birth of this system, take their origin from principles superior to matter, although indeed all matter acts mechanically, wherein the spiritualising authors, whom I have just named, had blundered even as the Cartesians by supposing that immaterial substances change if not the force at least the direction or determination of material bodies; whereas, according to the new system, the soul and the body perfectly observe their laws, each its own, and yet each obeys the other so far forth as is necessary.

And thus he proceeds beyond the limits of our following him, to pour forth the diverse reasons for his enraptured exultation over a system, which seemed to him to gather all that was valuable out of all other systems of all the ages, to escape their errors and to clothe the universe and its supremely exalted Creator in the glorious garments of the sunlight of truth itself. To our awakened view, this gorgeous speculation of two centu-

ries ago, is like the vision of a brain intoxicated with hashish. It was only a mirage! which did not satisty but only mocked the soul athirst for truth.

The third phase of spurious dualistic realism can only be conventionally represented by Brown, or by any other individual name; his name was suggested as representative, mainly because it has been made to bear the brunt of the most terrible onslaught ever made upon this philosophic hypothesis, which holds that, whilst the mind is intuitively apprised of its own existence, it has no such intuition of an external reality nor of aught outside of or other than the mind itself and its modifications; but at the same time, as a matter of unfaltering faith, it holds to the reality of matter and of an external world. We know self, but only believe in not self. This is a hybrid dualism. From Empedocles, 500 B. C., downward, the vicious axiom has been widely accepted that *like is only known by like*—that the object known must be of a nature like that of the knowing mind. Hence, either a mental modification has been taken as the symbol of the outlying external reality supposed to exist in answer to it, or else some refined species or filmy, unsubstantial, natural or supernatural *tertium quid*, has been installed as mediating between the knowing mind and the external world—between the *ego* and the external *non ego*, between mind and matter.

This acceptance of mind as certainly existing because known intuitively, and of matter as only suppposed or conjectured to be as the suitable explanation of a knowledge we may have of something other than itself, which represents it or suggests it to the knowing mind, places matter on a different footing from mind, by excluding it from the pale of intuition or immediate knowledge, and hence, as tested by the standard of legitimacy

which requires matter and mind to be on the same footing, matter is on this view acknowledged only as a bastard reality. By whatever shading, subtlety or refinement, matter and mind are denied an equally legitimate recognition as equally objects of immediate knowledge, all thus holding should, in the view which presides over the present discussion, be set down here as spurious dualistic realists. To this group many Platonists and a host of philosophers of different ages belong.

(2). Legitimate Dualistic realism. It was stated at the opening of the foregoing review of speculative hypotheses, that the hypothesis esteemed capable of vindication and hence legitimate and true, would be reserved to the last. The point is now reached where that ordeal must be passed.

The one point to be maintained is that matter and mind, phenomenally and substantially, are both equally objects of immediate knowledge; that neither rests on inference, and that each as known has as good a title to recognized reality as the other. They are twin sisters in the family of knowledge, without either having the advantage over the other of a superior claim to legitimacy or to the right of primogeniture.

Properly understood, it would seem that nothing could be more simple than the case before us. All the conditions of the problem are in the possession of every human being, so that there is no occasion to compass sea and land to gather the materials or to qualify one for an appreciation of its solution. It has too generally escaped attention, that metaphysics is not genetic but exegetic. Its business is not the creation of something new, but the faithful interpretation of what already exists. And as the question before us is not primarily one of logic but

of exposition, or interpretation, our appeal must be directed to each one's own common sense.

A simple concrete case, comprehensive of all the issues in question, will first be submitted in its spontaneous and simple form, wherein will appear only the common ground on which all stand; and then the abstract formulation of its supposed contents, where divergencies arise, will receive attention.

I am seated on a chair, with my arm resting on a table, pencil in hand, writing on a pad; my feet are crossed and resting on the floor. In this situation, without the slightest volition, my body, at several widely separated points, is in contact with surrounding objects which I immediately ascertain to be no part of my body, by rising and stepping away from them. Then, I resume my position as described and find myself experiencing again, the same firm support of and resistence to different parts of my person. There is here, in the main, no exertion of will; and yet the contacts with the chair and floor and table are sensibly felt. All this occurs when the body is in a relaxed, wearied and passive condition, and when there is no resistance of any voluntary effort, no arrest of any muscular exertion. The force exerted is wholly physical and yet I have an experience, a consciousness, of contacts and pressure and resistance, of an arrest of a tendency of the body to descend toward or below the floor, independently of any voluntary or conscious exertion by me of any energy. All this is a most palpable and matter of course knowledge of a simple state of fact, which is so natural and unconstrained that it would quite escape notice, were not attention deliberately fixed upon it. This knowledge is immediate and not the result of any process of inference or reasoning—I alight on it by simple introspection. It is a matter of

observation, and observation is a listening to nature, whereas experiment is a catechising of nature.

Undoubtedly, here is knowledge, a common sense knowledge, such as every human being has daily of himself and of something not himself. There is no conjecture nor speculation about it. It is plain matter of fact, which no one questions, nor can question, any more than he can question his own existence.

Now, what is contained in this concrete state of fact? This is a proper inquiry and our exegesis or explanation of this state of fact, must furnish the answer which we seek. The knowledge we have of these contacts, pressure and resistance as described, is sense-perception. This knowledge by perception, as we have seen, is not a matter of inference or reasoning, but an immediate or conscious knowledge of the states or affections of my physical organism, due to its contact with surrounding bodies with whose existence, so far forth as in immediate contact therewith, I am thereby made acquainted. If this contact be changed, the feeling or sensation alters correspondingly. In the case given, the feeling or perception exists only to the extent of actual contacts. If I rise and stand on my feet, free from contact with surrounding objects, except the floor, the feeling or perception of pressure is limited to the feet which alone are affected by the actual pressure from supporting the weight of the body. If one foot be raised, the sensation is then confined to the foot that remains in actual contact with the supporting body. If I again resume my position, in my seat by my writing desk, as at first described, the contacts are again felt as already described at several points, and over varying extents of surface, and separated from each other. This experience of a separation or relative *outness* of these affections and

affected parts should be particularly noted, as an instance of the direct cognition of an extended body, an experience of concrete extension. Moreover, the affections of these different parts are known at the same time and not successively. Reflect on this and see if the knowledge of the changed condition of the different parts affected is not taken in at once, and that no account whatever is taken of their nearness to or remoteness from the head. If, now, the will is brought into action on some part of the body, we have a like result as to the location and immediacy of the consequent affection of the part. Suppose attention be turned on the writing and the fingers are made to squeeze the pencil more tightly and then to relax,—the resistance to the muscular exertion is known by us, or perceived only where and when it occurs in fact, viz., at the ends of the fingers holding the pencil and at the very time of the volition. Now, join with me in the experiment and press your big toe against the floor. Are you not conscious of the resistance at the time and place of its occurrence? Repetition does not vary the result, and it cannot be denied that our knowledge of the resistance seems to be located in the toe just where and when it occurs. If this experiment be again varied and the contact with different parts of the body, as actual experiment has shown, be effected by a movement from without inward, instead of from within outward, the result is found to be identically the same, as the impressions made simultaneously on different parts of the bodily organism, if proper care be taken as to their relative sensibility, are felt instantaneously and simultaneously, and not successively at intervals corresponding to the relative distances of the parts affected from the head or any other imagined seat of sensation within the organism.

Without unduly extending this line of inquiry, remark that the sensations of touch or contact of pressure and muscular resistence are precisely the same in kind as all other sensations; and whilst it may not be satisfactory to say with Democritus that all sensations are only modifications of touch, it is doubtless true that no sensation is felt apart from an affection of our bodily organism.

In our exposition we have now reached the point where we are prepared to say that we see two things very plainly—one is, that we know our bodily selves; and the other, that we know something other than our bodily selves, it may be in contact therewith but separate or separable from the same. This knowledge does not result from reasoning or argument; it is not matter of inference or proof. You can neither prove it nor disprove it. It is self-evident—immediate, intuitive, indisputable.

That which is other than ourselves we may term the external *non ego.* And we have seen that it is only so much of this external *non ego* as is in direct or immediate sensible contact with our bodily *ego*, that we immediately and most certainly know. The portion of the house or of any surroundings, in contact with my physical organism, we have already plainly seen that I as consciously know as I do my own hand or foot. What is thus directly cognized may be termed the proximate external *non ego.* It is because we are thus conscious of so much of the external *non-ego* as is immediately in contact with our bodily selves, that, by analogy, corresponding reality and certainty of ixistence are ascribed to all other external things near and remote. I confidently submit that it is not possible for us to divest ourselves of the conviction and spontaneous recognition of the proximate external *non ego* as an existing reality, and

also as proof against all illusion, deception and fraud. In accordance with Rejd and others, we may view the remote external *non-ego* as suggested by the proximate, but not the proximate itself, as thus suggested or inferred. We believe the proximate external *non-ego* to exist as an objective, extended reality because we intuitively know it to exist; but we believe the remote to exist only by analogy of appearance and inference. The proximate basis of faith is knowledge. The senses never deceive us within their appropriate sphere of action; and it must be borne in mind continually, that one sense cannot do the work of another. Each sense is discriminated from every other, but no sense has a vicarious function. By the eye we see only an image, or colored extension, and by acquired habit discriminate distances: so far as the eye is concerned, the house around me has no more reality than smoke. But if I undertake to pass though what appears to be a wall, the muscular sense of resistance reveals solidity in relation to voluntary movement, as the sensation of pressure reveals the same solidity in an involuntary relation; the tactile sense, as in Cheselden's case, can also give the superficies and forms of solids, and in general, when the senses are interpreted aright and each is allotted its proper testimony, the testimony as given is true; if any illusion arises it is from not attending to the checks of sense and of reason on sense, so as to put a truthful interpretation on the testimony given. The senses are not responsible for their misinterpretation. No man is conscious of the past, nor of the future, nor of the distant. No man is conscious of the sun in the heavens, but every one with his eyes open and turned toward that object must perceive the evidence of its existence in the image of it formed in his eye.

For we are percipient of nothing but what is in proximate contact, in immediate relation, with our organs of sense. Distant realities we reach not by perception, but by a subsequent process of inference founded therein. * * * It is sufficient to establish the simple fact, that we are competent, as consciousness assures us, immediately to apprehend through sense the [proximate external] non-ego in certain limited relations; and it is of no consequence whatever, either to our certainty of the reality of a material world, or to our ultimate knowlede of its properties, whether by this primary apprehension we lay hold, in the first instance, on a large or a less portion of its contents.—(H.'s Reid p. 814 a. and Hamilton's Lectures on Met. p. 315.)

That portion of the material world which is brought into immediate contact with our sensitive organism is the terra firma, the sure and indestructible foundation, on which we build. To the extent that the world thus encompasses us and presses upon us, we as certainly and as directly know it as we know ourselves; in fact, we only the more certainly know ourselves by their discrimination from this immediately intuited external non ego, as something not ourselves and no part of ourselves; and from the certain existence and reality of what is thus most certainly known, by analogy the equal reality of what lies outside of the present sphere of intuition is allowed by an immediate and justifiable inference. The external world is not, therefore, a fiction, a dream, a mental fabrication, a phantom, nor a mere object of possible knowledge, or at best only an unknown something believed in through some natural and constraining suggestions and impulse from the floating play of symbolic impressions and ideas. It is found to be a solid prosaic reality, at whatever point we come in contact therewith, and hence, judging so much of it as is unknown from what is thus consciously and solidly known, the human mind has, in all ages, instinctively, without logic and without reasoning, accepted the reality of the entire external world as resting upon a footing as secure as that of our individual existence. In this respect, there-

fore, the faith of the vulgar is the true faith of the philosopher, with only this difference, that the philosopher gives as a reason for the faith that is common the knowledge that is common: and every adventurous vessel that has loosed the flukes of its anchor from the bed-rock of this harbor of common sense and common consciousness, has been dismantled and drifted to sea as a rudderless and unmanageable hulk, by the storms and cross-currents of the unfathomable ocean of lawless speculation. Our anchorage is in the stable, clear, indisputable and insuperable intuition of the non ego. It is believed that the foregoing exposition of this most critical fact of experience as to the external world, will commend itself, as natural and truthful, to every intelligent and reflecting mind. Each one is in possession of all that is material to an independent opinion, as to whether the interpretation given faithfully mirror's the workings of his own mind. Be sure of the precise meaning of the necessarily somewhat technical language used, and then check off the errors if any be detected, and the author of this attempt to act as nature's interpreter will be placed under sincere and lasting obligations by being made acquainted with any criticisms thus elicited. Your attention is specially challenged in this exposition of dualistic realism, to the primary point of departure here taken as located in the intuition and discrimination of the external *non ego*, as different from, and yet, as being as certainly known, as we know our complex selves. It is a most remarkable fact and worthy of special note, as we shall see, that as we intuit, phenomenally and noumenally, only a segment of the whole sphere of the external *non ego*, so in like manner do we intuit only a small segment of the sphere of the internal complex personal ego. The subconscious or latent modifications of mind,

and the subconscious modifications of the physical organism in all its vital functions, constitute respectively a terra incognita relatively comparable to the terra incognita of the external world; but in each, the unknown must not be allowed to usurp the place of the known. My ignorance only heightens the value of my knowledge, as the density of the surrounding darkness only gives increased importance to the lighted lamp which I carry in my hand, or wear upon my brow as a miner delving for hidden treasures in the deep depths of the bowels of the earth. Here, again, we are brought to the border land and behold that the real transcends the known and the knowable, and that the outlying domains beyond the utmost boundary of the immediate knowledge of consciousness and intuition, internal and external, is the sacred and inalienable inheritance of faith. Faith presupposes and transcends knowledge with respect both of the *ego* and to the *non ego*.

It would be a waste of time to dwell on the fact that the common sense of men, without any refinements of speculation, has in all ages and among all peoples grasped the substantial truth that the external world is as real as our bodily selves. Those who have battled most stoutly against the soundness of this spontaneous judgment, concede its universal and obstinate reality. Lewes remarks that "all the stories about Pyrrho which pretend to illustrate the effects of his scepticism in real life are too trivial for refutation." In a passage already quoted, Hume concedes that "The great subverter of Pyrrhonism, or the excessive principles of scepticism, is action and employment, and the occupations of common life. These principles," he continues, "may flourish and triumph in the schools, where it is indeed difficult, if not impossible, to refute them. But as soon as they

leave the shade, and are put in the presence of the real objects which actuate our passions and sentiments, and in opposition to the more powerful principles of our nature, they vanish like smoke, and leave the most determined sceptic in the same condition as other mortals." Shelling labors to explain the fact "that mankind at large believe in the reality of an external world," and "that the man of common sense believes, and will not but believe that the object he is conscious of perceiving is the real one." Berkely says: "The former—the vulgar—are of opinion that those things they immediately perceive are the real things." It is pertinent to quote, in this immediate connection, the following passage from Sir William Hamilton:

> The past history of philosophy has, in a great measure, been only a history of variation and error ("variasse erroris est); yet the cause of this variation being known, we obtain a valid ground of hope for the destiny of philosophy in future. Because, since philosophy has hitherto been inconsistent with itself, only in being inconsistent with the dictates of our natural beliefs—
>
> For Truth is Catholic, and Nature one;
>
> it follows, that peilosophy has simply to return to natural consciousness, to return to unity and truth.

The other aspect of the case to which attention was asked is that in which we know our corporeal selves as distinct from what surrounds us just as we have seen that we know the proximate external *ego* as not self. When we restrict our attention to this inner sphere, the question recurs with renewed and peculiar interest and force, whether the distinction between self and not-self—between subject and object, between mind and matter, can be detected and expounded even here. As the object of our research and as man knows himself, he does not exist as pure spirit nor as pure body, but as a union of body and spirit in one individual person. My definition of sensation that it is an individual's consciousness of any modification of his nervous organism, is believed to be

valid in the case of each of the senses, and it is the basis of a new analysis of the senses considerably increasing the list beyond five. I do not say the modification of physical organism, because the total nerve matter in man only averages in weight about one-fortieth part of the weight of the body, and yet its distribution is so very minute and ramified that, roughly, the expression modification of the physical organism might be supposed a proper substitute for the modification of the nervous organism; but, as a matter of fact, this would be wide of the mark, for, not only are certain portions of the body as the hair, nails, cartilages and tendous wholly outside of all nervous distribution and hence destitute of contractility and sensibility, but the sympathetic portion of the nervous system which functions the internal and vital organs, as the lungs, heart, stomach, intestines, liver, kidneys, blood vessels, &c., is quite sub-conscious, or outside of the sphere of consciousness—so that, it is only a portion of even the nervous organism, strictly speaking, whose modifications are properly embraced within the above definition of sensation. It is a matter of familiar demonstration, that by destroying the sensory nerve supply of any limb, as the arm or leg, and then lacerating it by cutting or burning, though seen to affect these members of one's body, it makes no more impression than cutting or burning one's coat tail. They are, then, as foreign to consciousness as billets of wood hung upon us with strings. The following passages from Descartes who was an anatomist, are exceedingly interesting in this connection:

"I remark here first of all," he says, "that there is a great difference between the spirit and the body in this, that the body, from its nature, is always divisible and that the spirit is entirely indivisible; for, in fact, when I consider myself in so far as I am only a thing which thinks, I do not distinguish in myself any parts, but I

know and conceive very clearly that I am a thing absolutely one and entire; and though the entire spirit seems to be united to the entire body, yet when a foot or any other part is separated from it, I know perfectly well that nothing on this account has been tak en away from my spirit; and the faculties of willing, of feeling, of conceiving, &c., cannot be properly termed its parts, for it is the same spirit which, in its totality ("tout entier"), is employed in willing, and which in its totality is employed in feeling, in conceiving, &c., but it is altogether contrary in things corporeal and extended."

Again he says:

"Nature has also taught me by the sensations of pain, hunger, thirst, &c., that I am not merely lodged in my body, as a pilot in his boat, but that I am united with it very intimately and in such manner confounded and mixed up with it that I compose with it a single individual. For if this were not so, when my body is wounded I would not feel on that account any pain, I who am only a thing which thinks; but I would perceive this injury by the understanding only, as a pilot by his sight, if something is broken in his vessel; and when my body has need of drinking or of eating, I would simply know this,even without being notified of it by vague sensations of hunger and thirst; for in truth all these sensations of hunger, thirst, pain, &c., are no other thing than certain confused modes of thinking which proceed from and depend on the mind and as it were the mixture of the spirit with the body." —(Descartes' Oeuvres, edit. Simon, pp. 124 and 120.)

These passages point with pertinence to the simplicity and persistent oneness and integrity of the conscious spirit in man, and within certain limitations, the presentation is unassailable. So long as the cord above the third cervical vertebra, and the vital point of the medulla, which by reflex action function respiration on which the circulation of the blood and consequent nutrition depend, be left intact, conscious sensation and voluntary movements are supposed to be detected in the mutilated organism. When, thus, we descend to the region of this dim twilight of corporeal life, the mental and physical forces still seem to be face to face in the co-action of spirit and body.

The citadel of materialism which sees only two faces here, as under all other conditions, of a single force is in the supposed function of the nerve cell in its relation

to the nerve fibre. The two ultimate anatomical elements of the nerve matter or tissue are the cell and the fibre. It is conveniently assumed that the fibres originate from the cells and that the cells evolve all the nerve force whose transmutations present the phenomena of thought, feeling and will. The favorite illustration drawn from the electric battery and circuit is a most unfortunate one, for in that case it is known that the wire conductors are metallic continuations of the poles of the battery, that a force is in fact conducted and that the force conducted is generated in the cells; whereas, in the nervous system, it is not known that the fibre has any such connection with the so-called cell, nor that the cell evolves any force whatever, nor that the fibre conducts anything at all, much less in the manner of a telegraph wire. As to the essential point of the connection of the fibre with the cell, the present state of science is seen in the following language:

> In the present state of our knowledge, however well we may be acquainted with the peripheric termination of a great number of nerve fibres, it cannot be said that the mode of the central origin of any single fibril has hitherto been proved.

This is the language of Max Schultze, than whom there is no higher authority, and it is quoted with approval in a recent edition of Gray's Anatomy. The various diagrammatic schemes, such as are presented in some physiologies and in Herbert Spencer's Psychology, for exhibiting the cell origin of nerve fibre and nerve force, are figments of the imagination and not portraitures of nature. It is astonishing with what assurance the critical and sacred facts of nature—in this most important domain of inquiry—have been supplanted by the veriest romancing, which utterly deceives and misleads the unwary. When such men as Huxley and Maudsley and others teach these nerve cell fictions for facts,

and none know it better than themselves, they remind us of the heathen priests described by Juvenal, who, whilst ministering at the altars of their false gods, farcically laughed in each others' faces, when they looked under their sleeves. This mockery of nature, by those who have been honored as her priests and interpreters, should be tolerated no longer. It is not known that any nerve force, little or much, wise or stupid, originates in the cell at all; it is at best a mere conjecture. Besides, it is perfectly certain that the fibre—the *axis cylinder*—and not the cell, is the fundamental element of the nervous organism, and hence the cell must be subordinate to it, probably by way of its nutrition. Moreover, the agency of a separate and superior force must be brought into controlling relation to the subordinate force of electricity, before the phenomena of intelligence, of mind will associate and blend with what would otherwise be the dull round of unrelieved physical action. It is positively known, in all cases of the display of intelligence in connection with electrical agency, that the result is due to a dual source of influence. It is conceded and agreed that the portion of the physical universe in proximate relation to mind is the nervous organism. And in our interpretation of the facts of our own constitution, we find two forces or a dual agency operative in the production of the phenomena of which we are cognisant. It is useless to look for mind and matter elsewhere in the whole compass of existence, if we do not find them here. Hence the distinctness and emphasis given to the foregoing line of discussion.

This point cannot be pursued farther at this time, but the explosion of the cell fiction of the physiologists, a pure but plausible invention to explain a supposed state of facts in nerve currents and in the relation of

fibres to cells, which probably does not exist, literally demolishes the citadel of unitarian materialism. This is one of Bacon's instances of an idolatry of images, false to nature, set up in the temple of the human mind; and it may be predicted that all clamor over the loss will be like that of Micah, "Ye have taken away my gods which I made * * * and what have I more?" No true worshipper at nature's shrine pays his devotions to any god of his own making, or if he does, it is liable to be taken from him. This cell-god is a fabrication of hasty speculation and the whole doctrine of nerve currents is open to question. A careful inquiry into the physiological aspect of this subject will be found in my *Thesis on the Dual Constitution of Man*, to which reference is made above.

The following passage from the First Alcibiades of Plato, presents the crude Socratic method of conducting the search after the dual constitution of man. As to this dialogue, "Socher and Stallbaum are of opinion that not a single substantial reason can be assigned for doubting its genuineness." The interlocutors are Socrates and Alcibiades.

Soc. Come, now, I beseech you, tell me with whom you are conversing?—Is it not with me? Al. Yes. Soc. As I am with you? Al. Yes. That is to say, I, Socrates, am talking? Al. Yes. Soc. And I in talking use words? Al. Certainly. Soc. And talking and using words are, as you would say, the same? Al. Very true. Soc. And the user is not the same as the thing which he uses? Al. What do you mean? Soc. I will explain; the shoemaker, for example, uses a square tool, and a circular tool, and other tools for cutting? Al. Yes. Soc. But the tool is not the same as the cutter and user of the tool? Al. Of course not. Soc. And in the same way the instrument of the harper is to be distinguished from the harper himself? Al. It is. Soc. Now the question which I asked was whether you conceive the user to be always different from that which he uses? Al. I do. Soc. Then what shall we say of the shoemaker? Does he cut with his tools only or with his hands? Al. With his hands as well. Soc. He uses his hands too? Al. Yes. Soc. And does he use his eyes in

cutting leather? Al. He does. Soc. And we admit that the user is not the same with the things which he uses? Al. Yes. Soc. Then the shoemaker and the harper are to be distinguished from the hands and feet which they use? Al. That is clear. Soc. And does not a man use the whole body? Al. Certainly. Soc. And that which uses is different from that which is used? Al. True. Soc. Then a man is not the same as his own body? Al. That is the inference. Soc. What is he, then? Al. I cannot say. Soc. Nay, you can say that he is the user of the body. Al. Yes. Soc. And the user of the body is the soul? Al. Yes, the soul. Soc. And the soul rules? Al. Yes. Soc. Let me make an assertion which will, I think, be universally admitted. Al. What is that? Soc. That man is one of three things. Al. What are they? Soc. Soul, body, or the union of the two. Al. Certainly. Soc. But did we not say that the actual ruling principle of the body is man? Al. Yes, we did. Soc. And does the body rule over itself? Al. Certainly not. Soc. It is subject, as we were saying? Al. Yes. Soc. Then that is not what we are seeking? Al. It would seem not. Soc. But may we say that the union of the two rules over the body, and consequently that this is man? Al. Very likely. Soc. The most unlikely of all things; for if one of the two is subject, the two united cannot possibly rule. Al. True. Soc. But since neither the body, nor the union of the two, is man, either man has no real existence, or the soul is man? Al. Just so. Soc. Would you have a more precise proof that the soul is man? Al. No; I think that the proof is sufficient. Soc. If the proof, although not quite precise, is fair, that is enough for us; more precise proof will be supplied when we have discovered that which we were led to omit, from a fear that the inquiry would be too much protracted.

We have here the germ out of which the Cartesian speculation was developed, for in it we see not only the pronounced discrimination between the body and the soul, but the same disparagement of the material part.

The poet has, in the following lines, measured his views by this subjective Cartesian standard:

> "This frame compacted with transcendant skill
> Of moving joints, obedient to my will:
> Nursed from the fruitful glebe, like yonder tree,
> Waxes and wastes—I call it mine, not me.
> New matter still the mouldering mass sustains;
> The mansion changed, the tenant still remains;
> And, from the fleeting stream, repaired by food,
> Distinct as is the swimmer from the flood."

Dr. Krauth has expressed his recoil from this unilateral view thus: "The attestation of consciousness is as real to

the substantial existence of our bodies as an integral part of our person, as it is to the substantial existence of our minds. * * As Philosophy alone knows them, there can be no mind conceived without matter, no matter conceived without mind. Materialism and idealism are alike forms of direct self-contradiction."

As bringing forth the doctrine of substantial duality into a strong light, the following passage, with two or three criticisms which it provokes, will serve most admirably our purpose.

But the meaning of these terms will be best illustrated by now stating and explaining the great axiom, that all human knowledge, consequently that all human philosophy, is only of the relative or phænomenal. In this proposition, the term "relative" is opposed to the term "absolute:" and, therefore, in saying that we know only the relative, I virtually assert that we know nothing absolute,—nothing existing absolutely; that is, in and for itself, and without relation to us and our faculties. I shall illustrate this by its application. Our knowledge is either of matter or of mind: Now, what is matter? What do we know of matter? Matter, or body, is to us the name either of something known, or of something unknown. In so far as matter is a name for something known, it means that which appears to us under the forms of extension, solidity, divisibility, figure, motion, roughness, smoothness, color, heat, cold, etc.; in short, it is a common name for a certain series, or aggregate, or complement of appearances or phænomena manifested in coexistence.

But as the phænomena appear only in conjunction, we are "compelled by the constitution of our nature" to think them conjoined in and by something; and as they are phænomena, we cannot think them the phænomena of nothing, but must regard them as the properties or qualities of something that is extended, solid, figured, etc. But this something, absolutely and in itself, i. e., considered apart from its phænomena, is to us as zero. It is only in its qualities, only in its effects, in its relative or phænomenal existence, that it is cognizable or conceivable; and it is only by a law of thought, which compels us to think something, absolute and unknown, as the basis or condition of the relative and known, that this something obtains a kind of incomprehensible reality to us. Now, that which manifests qualities,—in other words, that in which the appearing causes inhere, that to which they belong, is called their "subject," or "substance," or "substratum." To this subject of the phænomena of extension, solidity, etc., the term "matter" or "material substance" is commonly given; and, therefore, as contradistinguished from these qualities, it is the name of something unknown and inconceivable.

The same is true in regard to the term "mind." In so far as mind is the common name for the states of knowing, willing, feeling, desiring, etc., of which I am conscious, it is only the name for a certain series of connected phenomena or qualities, and consequently, expresses only what is known. But in so far as it denotes that subject or substance in which the phænomena of knowing, willing, etc., inhere,—something behind or under these phænomena,—it expresses what, in itself, or in its absolute existence, is unknown.

Thus, mind and matter, as known or knowable, are only two different series of phænomena or qualities; mind and matter, as unknown and unknowable, are the two substances in which these two different series of phænomena or qualities are supposed to inhere. The existence of an unknown substance is only an inference we are compelled to make, from the existence of known phænomena; and the distinction of two substances is only inferred from the seeming incompatibility of the two series of phænomena to coinhere in one.

Our whole knowledge of mind and matter is thus, as we have said, only "relative;" of existence, absolutely and in itself, we know nothing; and we may say of man what Virgil says of Æneas, contemplating in the prophetic sculpture of his shield the future glories of Rome—

"Rerumque ignarus, imagine gaudet."

—Hamilton's Lectures, pp. 96-7.

The two most salient and most important points of criticism are the following:

The first is upon the use of the word *relative*. Doubtless it is true, that we know nothing out of relation to our faculties. Any thing absolute, in any such sense as that it is out of relation to our faculties, can neither be an object of knowledge nor of faith; but to all intents and purposes, it would and must be to us as though it did not exist. But when, just afterwards, the author speaks of matter as thus absolute, i. e., as out of all relation to our faculties, it is on the assumption that it is so by virtue of being out of relation to it its own attributes. The language is: "But this something, absolutely and in itself, i. e., considered apart from its phenomena, is to us as zero." There exists, and to us there can be, no such thing as mind or matter in any such isolation or state of abstraction as is here supposed. There is and can be no

such thing as matter or mind believed, known or conceived apart from its properties, as there can exist in nature no properties except in the concrete. The same is as true of moral as of physical properties. And neither mind nor matter, as substance, is by any one contemplated as a real existence apart from its properties. The doctrine of relativity in its true sense, does not, therefore, cut off either substantive matter or mind from being objects of knowledge. There is and can be no such thing as a relation apart from the things related.

2. This leads to the second criticism which is, that we do not have any such naked phenomenal knowledge, projected on a back ground of total ignorance as is here described. Hamilton here as elsewhere most inconsiderately and inconsistently abandons substantial existence as outside of the reach of immediate knowledge. It is only placing Hamilton in a position consistent with his better self to utterly repudiate this superficial view of the case, although it appears and reappears so frequently and forcibly in his various writings as to have determined the opinion of very many against him as being a mere phenomenalist. But in numerous passages setting forth the fundamental features of Reid's system, he speaks of matter as well as of the mental self, as the objects of intuitive knowledge or consciousness. It is only by viewing his utterances in the light of the distinction between the phenomenal and noumenal intuitions, which has been taken and submitted in what precedes, that his better self stands forth in powerful vindication of the immediate philosophic *knowledge* of matter and mind, not only as phenomenal but as substantial realities. Indeed, this is the very point of his generous and magnificent exposition and defence of Reid, the founder of the Scotch school of Metaphysics, of which

Sir William Hamilton, who died in 1858, is by far the most learned and able disciple. A few citations will make this vital point sufficiently evident: "In an intuitive act," he says, "the object is known as actually existing." Again:

> In the first place knowledge and existence are then only convertible when the reality is known in itself because it exists, and exists since it is known. Nor did Reid contemplate any other.

Again he says:

> Of the doctrine of an intuitive perception of external objects, which, as a fact of consciousness, ought to be unconditionally admitted,—Reid has the merit in these latter times of being the first champion.
>
> But the very first fact of our experience contradicts the assertion, that mind, as of an opposite nature, can have no immediate cognisance of matter; for the primary datum of consciousness is, that in perception, we have an intuitive knowledge of the "ego" and of the "non-ego," equally and at once."
>
> This I shall illustrate by a memorable example—by one in reference to the very cardinal point of philosophy. In the act of sensible perception, I am conscious of two things—of "myself" as the "perceiving subject," and of an "external reality," in relation with my sense, as the "object perceived." Of the existence of both these things I am convinced: because I am conscious of knowing each of them, not mediately, in something else, "as represented," but immediately in itself, as existing. Of their mutual independence I am no less convinced; because each is apprehended equally, and at once, in the same indivisible energy, the one not preceding nor determining, the other not following nor determined; and because each is apprehended out of, and in direct contrast to the other.
>
> Such is the fact of perception as given in consciousness, and as it affords to mankind in general the conjunct assurance they possess, of their own existence, and of the existence of an external world.
>
> Nothing can be imagined more monstrous than the procedure of these philosophers, in attempting to vindicate the reality of a material world, on the ground of a universal belief in its existence; and yet rejecting the universal "belief in the knowledge" on which the universal "belief in the existence" is exclusively based.

If these passages be taken as the rule of judgment, I know not how the doctrine of a noumenal intuition, which I have endeavored to explain and enforce, could

be more explicitly announced. The substantial *ego*, mind, and the substantial *non-ego*, matter, are "equally and at once," according to his language, objects of "intuitive *knowledge*." There is a power in truth which often unconsciously prevails over error.

There are several considerations of the nature of *postulates* which should now be recalled, as having been kept clearly before the mind in the foregoing discussion.

1. The first is that there is a presumption against two substances, if one is adequate to the explanation of the facts: *Entia non sunt multiplicanda præter necessitatem.* This is the import of the first of Newton's noted "Four Rules of Reasoning in Philosophy," which runs in the following words:

> We are to admit no more causes of natural things than such as are both true and sufficient to explain their appearances. To this purpose the philosophers say that nature does nothing in vain, and more is in vain when less will serve; for nature is pleased with simplicity, and affects not the pomp of superfluous causes.—(Newton's Principia, p. 476.)

In the fourteenth century, an English Schoolman, Occam, had used this rule of philosophising in the interest of idealism so sharply, that it became known as Occam's razor; and it is the same rule out of which Sir William Hamilton has made so much as the *law of parcimony*. This rule, let it be observed, is not in the interest of any particular hypothesis, but is only regulative and cautionary, and it may be as flagrantly violated by an insatiable thirst for unity as by an easy going acceptance of undue multiplicity. The position of dualistic realism is that neither matter, nor mind, alone, is adequate to explain all the appearances in nature,—the facts of knowledge—but that the two together are adequate and that to recognise more than these two, would "be to affect the pomp of superfluous causes."

2. The second criterion of a legitimate philosophy kept in mind is that its foundation be laid in knowledge, from which all inference is excluded. The primary question in philosophy is not one of logic but of interpretation or exposition, wherein our appeal must be directly to consciousness or our own intuitions. If matter and mind as substantial realities, are known only by inference, however short or natural the inference, then they lie outside of philosophy and we have only phenomenalism left as legitimated by this criterion; but if we directly intuit both matter and mind, then dualistic realism is legitimated and phenomenalism is discredited as spurious. If mind alone be intuited and matter be inferred, then idealism is true; and, on the other hand, materialism is true, if matter alone be directly cognised and mind be only an inference. In what precedes, this criterion has not been forgotten, nor evaded, but consciously challenged at every step of the procedure. Inference may enter into the superstructure, but not into the foundation as fundamental.

3. The third criterion which has presided over our thought is that, as there is no knowledge without an object, so the object of immediate knowledge must be individual and concrete. It cannot be a modification of mind, separated from a mind modified, nor a quality of matter, separate or apart from matter modified. Matter and mind are known in their individual attributes as concrete realities, each utterly incompatible with and antagonistic to the other—the one having trinal extension, picturable form and divisibility; the other, unpicturable and indivisible ubiquity; the one is obedient to the laws of mechanics and the formulae of mathematics; the other has free will and moral accountability. These facts in their totality cannot be reduced to less than two

groups, and hence our realism must be dual to correspond to the facts.

4. The subjective internal ground of philosophic knowledge is the possession of a knowing power or energy, which is native and ultimate, and which has the function of cognising simultaneously and necessarily both the apparent and the real. As to matter, this power of intuition is both sensuous and supersensuous; and as to mind, it apprehends not only the phenomenal but the real self. In what has been submitted, it is believed that the evidence shows that the phenomenal and noumenal demands of this power are met by matter as truly as by mind; and if so, then neither is entitled to push aside the other and to obtrude itself into the place of both. The demands of our internal cognitive power are alike met by each of these objects as objects of knowledge, and therefore the mind is constrained to give them equal recognition as substantial, legitimate and valid existences.

There are several *corollaries* from the philosophic doctrine of dualistic realism which should be announced, before passing to the consideration of Theistic Realism.

1. The acceptance of the substantial reality of mind and matter raises the presumption in favor of each, that it is naturally imperishable. Each is known as permanent in the midst of change. The rock that stands immovable amidst the surgings of tides and storms for centuries, we expect to survive like perturbations in the future. "When we say that matter has objective existence, we mean that it is something which exists altogether independently of the senses and brain processes by which alone we are informed of its presence. An exact or adequate conception of it, if it could be formed, would probably be very different from any conception which our senses will ever enable us to form;

but the object of all pure physical science is to endeavor to grasp more and more perfetly the nature and laws of the external world."

Physical science is based entirely upon the testimony of the senses in observation and experiment and upon the mathematical deductions therefrom. It "deals fearlessly alike with quantities too great to be distinctly conceived and too small to be perceived by the aid of the most powerful microscopes; such as, for instance, distances through which the light of stars or nebulae, though moving at the rate of 186,000 miles per second, takes many years to travel; or the size of the particles of water, whose number in a single drop may, as we have reason to believe, amount to somewhere about

10^{26} =100,000,000,000,000,000,000,000,000.

[One hundred times one hundred thousand million times one hundred thousand millions=100 septillions, *French notation.*]

"Yet we successfully inquire not only into the composition of the atmospheres of these distant stars, but into the number and properties of these water-particles, nay, even into the laws by which they act upon one another. The grand test of the reality of what we call matter, the proof that it has an objective existence, is its indestructability and uncreateability—if the term may be used—by any process at the command of man. The value of this test to modern chemistry can scarcely be estimated. In fact we can barely believe that there could have existed an exact science of chemistry had it not been for the early recognition of this property of matter; nor in fact would there be the possibility of a chemical analysis, supposing that we had not the assurance by enormously extended series of previous experiments, that no portion of matter, however

small, goes out of existence in any operation whatever. * * * * * * This then is to be looked upon as the great test of the objective reality of matter. It is only, however, within comparatively recent years that it has been generally recognised, that there is someing else in the physical universe which possesses to the full as high a claim to objective reality as matter possesses, though it is by no means so tangible, and therefore the conception of it was much longer in forcing itself upon the human mind. * * * The grand principle of Conservation of Energy. which asserts that no portion of energy can be put out of existence, and no amount of energy can be brought into existence by any process at our command, is simply a statement of the invariability of the quantity of energy in the universe—a companion statement to that of the invariability of the quantity of matter. Just as gold, lead, oxygen, etc., are different kinds of matter; so sound, light, heat, etc., are now ranked as different forms of energy, which, has been shown to have as much claim to objective reality as matter has."—(Tait's Recent Advances in Phys. Sci., pp. 346, 4, 14, 15, 17, 2.) The fact is, however, that physical energy is not known apart from matter, nor is matter known apart from energy; so that, the non-ego which we intuit, or immediately cognise, is a concrete object possessing extension and energy. In like manner, as to our internal self-hood, no alembic nor crucible has ever dissipated our personal identity which surmounts all obstacles and survives all the mutations from the cradle to the grave, and even the grave may be only the occasion of its shaking the dust of earth from its wings and pluming itself for the bolder flight of another and an immortal life.

The natural reason for the imperishableness of the

soul is as legitimate and cogent as for the indestructibleness of matter—not its combinations, which are mutable and perishable, but its ultimate elements, whatever these may be. Those who hold the theistic theory of the universe, standing as they do in the recognised presence of omnipotence, esteem both the actual and the continued existence of each as contingent on the good pleasure of the Deity. "The doctrine of an immortal spirit will never come from the dissecting room nor the laboratory, unless it is first carried thither from a higher sphere. Yet there is nothing in these workshops that can efface it, any more than their gasses and exhalations can blot out the stars from heaven." Whatever be the soul's origin, it is naturally inferred from its simplicity and indivisibility, its persistent identity and individuality, together with its ever prevailing unity of consciousness, that it is so constituted as to be naturally destined to immortality, without the loss or impairment of its native powers or of its acquired treasures. Matter as known is real, and no part of it, nor of its store of energy, can be destroyed by any known means; and shall we say less of spirit and of its princely stores of energy? The natural and resolute presumption of the soul's immortality is the bed-rock on which may be built the superstructure of argument drawn from diverse sources; and this presumption casts the burden of proof on those who would deny our heirship to eternity.

2. Again: if mind and matter are reciprocally objective and concrete realities, then time and space must have objective and empirical reality. It is the presentment in consciousness of concrete phenomena, as actual and as in succession, which arouses into action the native noumenal intuition of space and time as permanent elements of the fact of knowledge. All movements, men-

tal and material, presuppose both space and duration. A thought, as certainly as the falling of an apple, must occur somewhere as well as somewhen; and thus we see that mind, as truly as matter, bears inexorable but wholly unlike relations to space. Hence, all attempts at localising mind other than where its presence is attested by consciousness, or at subjecting mind to the conditions of trinal extension, which are the space relations peculiar to matter, unwittingly, or purposely tend to its materialization, i. e., to its subversion as a substantial object of knowledge and existence. Love, hope, joy, fear, sorrow, thought and other mental states, are certainly appreciable as having a local habitation within the sphere of our bodily selves and as having intelligible degrees of rational magnitude, but no one conceives of them as capable of being adjusted by the points of the compass, nor as capable of measurement with yard sticks and tape lines. Those permanent elements of knowledge which exist independently of the existence or activity of our minds are obviously not originated by us. Such are time and space. We conceive, we do not constitute them: and so of mind and matter, we cognise, we do not create them.

3. Dualistic realism likewise reveals a duality of energy. Substance as comprehensive of attributes is necessarily potential, or a depository of energy. Energy is not an abstraction, but an attribute of substantial reality. It is the very essence of causality, which must be twofold as the only two concrete causal agents of which we have knowledge, are mind and matter. It was as a part of his philosophy of nihilism, that Hume denied causality. The conservation of energy, though not fully demonstrated, is, nevertheless, prudently accepted as beyond question; but it has not been

sufficiently considered, that its sphere is wholly within the domain of matter. The attempt to reduce the energy of mind to mechanical laws and thus to merge it in the energy of matter is a miserable failure—even living matter, in its lowest bioplastic condition, according to most careful and competent observers, "manifests certain phenomena not to be accounted for by physics." —(The Machinery of Life by Dr. Lionel S. Beale, pp. 19 and 45.) Again, it has not been sufficiently considered that, even were the phenomena of physical life reducible to mechanical laws, still realistic dualism would not thereby be invalidated. An accute and cautious advocate of the mechanical view says:

> It is certain that the materials of the organism are to a great extent subject to the common laws of mechanical and chemical forces. It is not proved that these same forces are incompetent to produce the whole series of interstitial changes in which the functions of life common to vegetables and animals consist. On the contrary, the more we vary our experiments and extend our observation, the more difficult we find the task of assigning limits to their power.

But whatever the ultimate determination of the problem of vital action in the physical organism, the distinctness of the spiritual part as the embodiment of an energy not to be confounded with nor merged into the energy of matter, is very strikingly put by this very author, who favors the mechanical view of bodily life. He says:

> If we take in a ton every twelvemonth, in the shape of food, drink, and air, and get rid of only a quarter of it unchanged into our own substance, we die ten times a year—not all of us at any one time, but a portion of us at every moment. It is a curious consequence of this, we may remark by the way, that if the refuse of any of our great cities were properly economized, its population would eat itself over and over again in the course of every generation. * * * We have no evidence that any single portion of the body resists decomposition longer during life than after death. Only, all that decays is at once removed while the living state continues.

If the reader of this paper live another complete year, his self-conscious principle will have migrated from its present tenement to another, the raw materials, even, of which are not as yet put together. A portion of that body of his which is to be will ripen in the corn of the next harvest. Another portion of his future person he will purchase, or others will purchase for him, headed up in the form of certain barrels of potatoes. A third fraction is yet to be gathered in a Southern rice-field. The limbs with which he is then to walk will be clad with flesh borrowed from the tenants of many stalls and pastures, now unconscious of their doom. The very organs of speech with which he is to talk so wisely, or plead so eloquently, or preach so effectively, must first serve his humbler brethren to bleat, to bellow, and for all the varied utterances of bristled or feathered barn-yard life. His bones themselves are, to a great extent, "in posse," and not "in esse." A bag of phosphate of lime which he has ordered from Professor Mapes, for his grounds, contains a large part of what is to be his next year's skeleton. And, more than all this, as by far the greater part of his body is nothing, after all, but water, the main substance of his scattered members is to be looked for in the reservoir, in the running streams, at the bottom of the well, in the clouds that float over his head, or diffused among them all.

For a certain period, then, the permanent human being is to use the temporary fabric made up of these shifting materials. So long as they are held together in human shape, they manifest certain properties which fit them for the use of a self-conscious and self-determining existence. But it is as absurd to suppose any identification of this existence with the materials which it puts on and off, as to suppose the hand identified with the glove it wears, or the sponge with the various fluids which may in succession fill its pores. Our individual being is in no sense approximated to a potato by living on that esculent for a few months; and if we study the potato while it forms a part of our bodies under the name of brain or muscle, we shall learn no more of the true nature of our self-determining consciousness than if we studied the same tuber in the hill where it grew.—The Mechanism of Vital Actions, by Prof. Oliver Wendell Holmes, M. D.

The following passage from one of the most eminent physicists, Prof. P. G. Tait, exempts mind from the domain of matter:

Sir W. Thomson's splendid suggestion of Vortex-atoms, if it be corret, will enable us thoroughly to undcrstand matter, and mathematically to investigate all its properties. Yet its very basis implies the absolute necessity of an intervention of Creative Power to form or to destroy one atom even of dead matter. The question really stands thus:—Is Life physical or no? For if it be in any sense, however slight or restricted, physical, it is to that extent a subject for the Natural Philosopher, and for him alone.

There must always be wide limits of uncertainty (unless we choose to look upon Physics as a necessarily finite Science) concerning the exact boundary between the Attainable and the Unattainable. One herd of ignorant people, with the sole prestige of rapidly increasing numbers, and with the adhesion of a few fanatical deserters from the ranks of Science, refuse to admit that all the phenomena even of ordinary dead matter are strictly and exclusively in the domain of physical science. On the other hand, there is a numerous group, not in the slightest degree entitled to rank as Physicists (though in general they assume the proud title of Philosophers), who assert that not merely life, but even Volition and Consciousness are merely physical manifestations. These opposite errors, into neither of which is it possible for a genuine scientific man to fall, so long at least as he retains his reason, are easily to be seen very closely allied. They are both to be attributed to that Credulity which is characteristic alike of Ignorance and of Incapacity. Unfortunately there is no cure; the case is hopeless, for great ignorance almost necessarily presumes incapacity, whether it show itself in the comparatively harmless folly of the spiritualist or in the pernicious nonsense of the materialist.

Alike condemned and contemned, we leave them to their proper fate—oblivion; but still we have to face the question, where to draw the line between that which is physical and that which is utterly beyond physics. And, again, our answer is—experience alone can tell us; for experience is our only possible guide. If we attend earnestly and honestly to its teaching, we shall never go far astray.—Recent Adv. in Phys. Sci., pp. 24-5.

It is not the language of thoughtless flippancy but of scientific gravity, which is here used by Prof. Tait in characterising the attempt to refer the phenomena of consciousness and free will to the laws of matter as contemptible and ridiculous.

In a passage already quoted, Prof. Huxley says that "There is every reason to believe that consciousness is a function of nervous matter;" and on page 291 of the same work he says, "Why 'materialism' should be more inconsistent with the existence of a Deity, the freedom of the will, or the immortality of the soul, or with any actual or possible system of theology, than 'idealism,' I must declare myself at a loss to divine." Yet, on page 314, in summing up the argument of Berkeley, he says explicitly,—"I conceive that this reasoning is inefraga-

ble. And, therefore, if I were obliged to choose between absolute materialism and absolute idealism, I should feel compelled to accept the latter." Prof. Huxley here tells us, first, that there is every reason for believing in materialism and that he cannot divine in it the germs of any thing destructive of man's most sacred beliefs and hopes; and yet, in the next breath, he turns upon his heels, bows submissively to the Irish Bishop, and humbly confesses that in the alternative he would feel bound to accept of idealism rather than of materialism! The scientist and philosopher, like other people, is bound to act rationally and to accept and adhere to what, according to the evidence in the case, appears to be the truth, whether palatable or not. This, unfortunately, is not the only illustration of the unsteadiness of the mercurial nature of this distinguished scientist. Whatever value attaches to his testimony, we here have it in favor of both materialism and idealism, and therefore his complete testimony is either reducible to zero or valid only to the extent that it supports dualistic realism. It is believed to be rigorously true, that the rejection of the evidence in support of either matter or mind must issue in the rejection of both, for the testimony for both is given by the same witness, our intuition; so that the only consistent alternatives are nihilism or dualism—as the whole of our intuition must be accepted or rejected, there is either no causal energy in the universe or there is a twofold causal energy in the concrete active agencies of mind and matter.

The only true position and the one which it has been the present endeavor to emphasize is that mind and matter stand abreast in the path of knowledge; but if either be entitled to a superior claim to recognition, doubtless it must be mind, for we know matter only

through mind, i. e., by the exercise of the cognitive power of mind. The knowing self certainly cannot be less certainly known as existent and real than the not-self, the object known. But a discrimination adverse to either is fatal to both.

4. The reality of the moral factors, which play a supreme part in the history of the human race, finds its seat in the native constitution of the human mind. The importance of discriminating between the constitutional and the adventitious, and between functions normal and abnormal, is as important in the world of mind as in the sphere of organisms. The builders of governments and of civilizations, can as certainly count on the resources of nature as the builders of bridges and steamships.

5. The final inference which shall now be allowed a notice, is cautionary. It would be a total misconception of wnat precedes to understand it as in any way attempting to exhibit the maximum of our knowledge of mind and matter; on the contrary, it would be nearer the truth to understand it as giving the minimum of such knowledge. As intelligent corporeal beings, placed in the midst of our actual environments, we cannot but know ourselves and something not ourselves and believe and act upon the assumption of the reality and truthfulness of this knowledge. But after having gained this footing, we have picked up only a grain of sand from the ocean beach, and yet we are placed thereby in a situation to appreciate with keener zest the special sciences relating to mind and matter, all of which presuppose and assume in some vague and it may be unsatisfactory way, what metaphysics endeavors to supply in the way of exposition and elucidation. Hence its aim is not isolated but in common relation to the several sub-divisions of knowledge. When, in the light of reflection, the

primary and spontaneous act of knowing is interpreted and mind is ascertained to be immediately percipient of self and also of not-self or matter, we do not understand how this can be so but only the fact that it is so. Even Newton himself did not pretend to understand the ultimate nature of gravitation, but he deemed its reality and value beyond question. He says: "But hitherto I have not been able to discover the cause of those properties of gravity from phenomena, and I frame no hypothesis. * * * And to us it is enough that gravity does really exist, and act according to the laws which we have explained."—(Newton's Principia, pp. 506-7.) The most incomprehensible mysteries of the universe are epitomized in man himself, as expressed in the following language by Pascal: "Man is to himself the mightest prodigy of nature; for he is unable to conceive what is body, still less what is mind, but least of all is he able to conceive how a body can be united to a mind; yet this is his proper being."—(Pensee's partic. 1, art. vi, p. 26.)

What we intuitively know is only a small island in the midst of a boundless ocean. Setting forth from the sure haven of this island home, our inferential or discursive powers explore the surrounding heights and depths, and faith feels yearnings which can be satisfied only by the voice of the Eternal One.

3. Theistic realism. It has been said in what precedes, that ontology or metaphysics deals with the facts of consciousness, not merely *inter se*, as such, but in relation to realities existing out of consciousness; also, that the one point in common with all realists is that, in the act of knowledge, we grasp phenomena *plus*

substantial reality. The substantial realities which, as we have seen, are immediately known through our noumenal intuition, are matter and mind. The primary sphere of the manifestation of this distinction between mind and matter, as separate but intimately associated substantial realities, is in our sensible relations to an external world as different from ourselves and yet so far forth as in contact with us, intuitively known. If we find not in the constitution of man himself, the dual realities of mind and matter, it is in vain that we go in search of them elsewhere throughout the whole universe beside. But, having the light of this duality of our own constitution as a brightly burning torch in our hands, then in the search for God as distinct from the world, we can intelligently scrutinize what may purport to be the foot prints of an author of nature as distinct from nature itself. But to go forth without having first settled this preliminary question as to the reality and duality of matter and mind, and to expect to lay hold of this truth in some remote corner of the universe, is not a cautious and prudent way of attempting to rise through nature and nature's laws up to nature's God, but a rash attempt to lay hasty and violent hands on him by strategy. The sovereign reality cannot be thus captured. The heights of his abode must be attained by treading the narrow path of self-knowledge.

We must first know ourselves and the universe, if we would know God and the universe. *God is a spirit and they that seek him must seek him in spirit and in truth.*

We are not conscious of God. Taking consciousness in its fullest import as the organ of immediate knowledge both of appearance and of reality, of phenomena and of noumena, in other words, taking con-

sciousness as the full equivalent of the phenomenal and noumenal intuition, the statement here made is, that we do not know God intuitively, we are not conscious of God. He is not, in either its phenomenal or noumenal sense, an object of intuition. It is feared that the expression "inferential intuition" previously used may be misleading, unless it be so explained as that it will be seen and understood clearly, that whilst we may be conscious of the operation of mind which makes the inference, and of the inference itself, yet the inference is made by the discursive or logical power and not properly by the power of intuition, which, in its distinctive function deals with self-evident truths and not with inferences or logical arguments. The existence of God is not self-evident but inferential. It is a question of mediate evidence and cumulative proof, and not of direct knowledge. It is not a self-evident matter, but one of information. If we were conscious of God, we would have no occasion to seek Him. No: God-consciousness is the shibboleth of Pantheism.

The definition of God which the evidence adducible suggests is, that He is an omnipotent spiritual being, infinite, eternal, omniscient, good, just and truthful. The worlds of mind and matter show the impress of these attributes which can only exist as the attributes of a concrete Being. God is not the infinite, nor the absolute nor any other abstraction. We cheat ourselves in supposing it.

The evidence in proof of God's existence and character may be arranged under seven leading heads: 1. The historical, which undertakes to set forth the simple state of opinion touching this matter in the different ages among the different peoples; 2. the apriori, or so-called ontological proof, which proceeds as did Descartes, to

conclude the fact of an all perfect being from the idea of such a being; 3. the cosmological proof, or the interpretation of the principle of efficient causality relative to the phenomena of mind and matter; 4. the teleological argument, or a like exposition of the principle of final causes; 5. goodness; 6. justice; 7. truth. The last five lines of evidence have, it is believed, unanswerable value; the first two have more literary than logical import.

In the work of Prof. Tait already quoted, p. 26, he speaks of "the fact that all portions of our science, and especially that beautiful one, the dissipation of energy, point unanimously to a beginning, to a state of things incapable of being derived by present laws of tangible matter and its energy from any conceivable previous arrangement."

Says J. S. Mill, whom no one will suspect as prejudiced in favor of Theism: "There is nothing to disprove the creation and government of Nature by a sovereign will; but is there anything to prove it?"—(Posthumous Essays, p. 137.) This question he answers on subsequent pages, (174-5,) thus: "Leaving this remarkable speculation—'the survival of the fittest'—to whatever fate the progress of discovery may have in store for it, I think it must be allowed that, in the present state of our knowledge, the adaptations in Nature afford a large balance of probability in favor of creation by intelligence. * * * * * * The argument is greatly strengthened by the properly inductive considerations which establish that there is some connection through causation between the origin of the arrangements of nature and the ends they fulfil." As to the attribute of goodness, (pp. 190-1) he says: "Yet endeavoring to look at the question without partiality or prejudice and

without allowing wishes to have any influence over judgment, it does appear that granting the existence of design—[which is unmistakably granted in the passage just quoted], there is a preponderance of evidence that the Creator desired the pleasure of his creatures. * * * For whatever force we attach to the analogies of Nature with the effect of human contrivance, there is no disputing the remarks of Paley, that what is good in nature exhibits those analogies much oftener than what is evil." —(p. 118.) The essay on *Theism* from which all the above extracts, except the last, are taken, Mr. Mill's editress informs us (pp. viii and x),is "the last considerable work which he completed, it shows the latest state of the author's mind, the carefully balanced result of the deliberations of a lifetime." The logical conclusions as to intelligence and benevolence being evidenced in nature as attributes of its author, are fairly quoted, although his individual views were strangely discordant with what might be expected from these statements. But it is a fair reflection, that the reluctance of the testimony of this expert logician only adds strength to the support it gives to the doctrine of theism.

However, attention must be now withdrawn from the general argument, as it is not possible to do more than give this passing intimation of its drift.

But a general observation to which especial attention is called in this connection is, that this inferential procedure, however comprehensively and skillfully conducted, is not one of discovery but of construction. It seems to be very plain that man by searching could never find out the fact of the existence of such a being as this God—it is meaningless to speak of knowing the fact of his existence apart from his character or attributes. In a scientific procedure, the conclusion of an

induction must be no broader than the facts known. The house must not overlap but stand flush with its foundation. Concede that the whole universe of known mind and matter has been analyzed and then reduced to a synthesis; the facts not being infinite they could not suggest nor warrant the infinite as an induction of knowledge. No; the natural and inevitable doom of the human mind—of any finite mind, left to its own search in this finite universe for the ultimate ground of all things, is not theism. The doctrine of theism or of theistic realism is not a scientific discovery nor a matter of cognitive philosophy. The proofs mentioned above only serve to construct the evidence in support of the propostion that there is a God, such as defined, but not to discover it. It is like constructing the evidence at present in support of the law of gravitation. It took Newton to formulate and announce this law, but a school child can now understand its import and proof. *In the beginning God created the heavens and the earth.* But let the proposition which announces God's existence and character come whence it may, the evidence from nature in support of that proposition which challenges our attention, when sifted and articulately compacted, constitutes what is known as Natural Theology. It has become my custom to treat Natural Theology as the highest phase of ontology or metaphysics, for it presupposes and subsidises rational and philosophic or noumenal ontology. There is perhaps no department of inquiry more in need of reconstruction than this one, and the present state of the sciences greatly strengthens its positions by new elucidations and vast stores of cumu lative proof.

It may be well to notice that, as the knowledge of God is contingent and not self-evident and necessary, its

fate is precarious; it may not exist, or it may die out. How often has it died out! The race probably started with it, but, tested by the standard of our definition which is believed to rest in all its parts on fair inferences from nature, the knowledge of this true God has been, as a historic fact, displaced among most of the nations of the earth. The plain and sad truth in this case is believed to be concisely stated in the following words of Leland:

> It is also observable, as I shall shew distinctly in another place, that when the Pagan authors, who lived before the times of Christianity, urge the consent of nations against the atheists in proof of a Deity, they generally speak of Gods in the plural and not of one God only. Yet, nothwithstanding their polytheism, and the many gods they acknowledged and worshipped, which was a great and most culpable defection from the true primitive religion, they still retained in some degree the idea of one supreme Divinity. But it must be owned, that it seemed at length to dwindle into the notion of one God, superior in power and dignity to the rest, but not of a different kind from the other divinities they adored, whom they looked upon to be really and truly gods as well as he, and sharers in the sovereign dominion with him. That this was the general popular notion will appear in the farther progress of this work.—(Leland's Chris. Rev. Vol. 1, p. 86.)

The only way to keep this doctrine alive in the human mind is by each family, school-room and church inculcating it upon the rising generations, just as each age has to be taught its alphabet and multiplication table. The state with us is not atheistic; nor is state education. The moral nature of man consisting of intelligence, freedom and conscience—this ultimate conscious fact of man's moral agency, is pre-supposed by every court house and by the whole machinery of law and government. All this finds its full explanation only in the justice and moral government of the author and ruler of man's nature.

It is already sufficiently evident that the power of mind by which we take in the result of all this instruction and proof is faith. Faith is as legitimate and as natural a function of the mind as intuition; it is in

fact a form of knowing, and is what would correspond to our inferential intuition. But we know God not properly by intuition but by faith. The object of a true faith is as real as the object of consciousness, but the light in which we see it is not that of self-evidence. Theistic realism, therefore, takes its place properly by the side of philosophic realism as its complement and completion and not as its substitute nor as its rival or antagonist. "There are three spheres of wonder in thought. The lowest is simple matter, with its mysteries and beauty and grandeur. The highest is pure Spirit, the self-existent cause of the universe, and his angels. Midway between is the being in whom spirit takes to itself matter, not that they may mechanically cohere, but that a new world of wonder may arise—mysterious forces, and forces which neither simple matter nor pure spirit in their isolation possesses. Matter and mind conjoined do not merely add their powers each to each, but evolve new powers, incapable of existing outside of their union. * * * The philosophy of the future—its universe shall be one of accordant, not of discordant matter and mind—a universe held together and ever developing under the plan and control of the one Supreme, who is neither absolutely immanent, nor absolutely supramundane, but relatively both—*immanent* in the sense in which deism denies his presence, *supramundane* in the sense in which pantheism ignores his relation. Its God shall be not the mere maker of the universe, as deism asserts, nor its matter, as pantheism represents him, but its Preserver, Benefactor, Ruler and Father, who, whether in matter or mind, reveals the perfect reason, the perfect love, the perfect will, the consummate power, in absolute and eternal personality." (Dr. C. P. Krauth, Vice-Provost, University Pa.)

The two groups of second causes are those of matter and those of mind: and the assumption of a first cause is entitled to consideration only as being compatible with their known distinctive efficiency. In brief, the dependence of all second causes is such that, without the original action of the first cause, they had never existed and its integrity and sufficiency would not be impaired by their ceasing to be. Moreover, during their co-existence and continuance, the first cause bears to the second causes the twofold relation of sustaining and controlling them. In the ordinary operations of nature, the inherent and peculiar energies of matter and of mind are not suspended nor superceded as held by Cartesians, nor abandoned to themselves as held by Leibnitz, but are actively and unceasingly sustained and controlled by omnipotence under the guidance of omniscience tempered by goodness, justice and truth. Nature's operations point to an ab extra source of power as explanatory of their initiative and also of their continuance; so that by nature's own teachings, the God of nature is not to be confounded with nature itself, nor with nature's operations; nor is nature allowed to supercede its author and governor. And thus theistic realism is seen to involve a dualism most profound, with the finite universe of matter and mind on one hand, and, on the other, God the Creator, Preserver and Lord.

Jonathan Edwards, 1703-1758, heads the list of American philosophers, and is one of the first thinkers of all ages; and as his towering genius grappled with the more abstruse questions in philosophy, whilst pursuing his labors in theology, he never lost sight of the axiom, whose quotation shall close this discussion—*That whatever is true in theology can be shown to be both true and reasonable in philosophy.*